by Schneider Electric

INSTALLATION/OPERATION

Spectra® IV SL and Spectra IV SE Series

23X, 27X, and 35X Dome Drives

C3463M (10/09)

Contents

Description . . . 5

Installation . . . 6
- Switch Settings . . . 6
  - SW1: Receiver Address . . . 6
  - SW2 Switch 1: AD-32 Preset System . . . 6
  - SW2 Switch 2: CM9502 Setting . . . 6
  - SW2 Switch 3: Control System Compatibility . . . 6
  - SW2 Switches 4 and 5: Serial Port Settings . . . 7
  - SW2 Switches 6 to 8: Baud Settings . . . 7
- Dome Drive . . . 8

Operation . . . 9
- Quick Operation Guide . . . 9
- Quick Configuration Guide . . . 9
- Preset 95: Accessing Main Menu . . . 10
  - CM6700/CM6800 . . . 10
  - KBD200A/KBD300A: Direct Mode Only . . . 10
  - CM9500 . . . 10
  - CM9740/CM9760/CM9770/CM9780 . . . 10
  - KBD4000/KBD4002 . . . 10
  - MPT9500 . . . 10
  - NET300/NET350/NET4001A . . . 10
  - Endura Workstation . . . 11
  - VCD5000 . . . 11
  - DX4100/DX4500/DX4600/DX8100 . . . 11
  - Digital Sentry® System Software . . . 11
  - Digital Sentry DS ControlPoint . . . 11
  - DVR5100 . . . 11

23X LowLight Day/Night Menu Tree . . . 12

27X LowLight Day/Night Menu Tree . . . 14

35X LowLight Day/Night Menu Tree . . . 16

Language . . . 18

System Information . . . 19
- DIP Switch Information . . . 19

Display Setup . . . 20
- Label Positions . . . 21

Dome Settings . . . 22
- Camera . . . 22
  - Type of Lighting . . . 22
  - Auto Focus . . . 22
  - Zoom Limit . . . 22
  - Zoom Speed . . . 23
  - Low Light Limit . . . 23
  - IR Cut Filter . . . 24
- Advanced Camera Settings . . . 25
  - Shutter Speed . . . 25
  - AGC Limit . . . 25
  - Auto Iris . . . 25
  - Auto Sharpness . . . 26
  - Auto White Balance . . . 26
  - Backlight Compensation . . . 26
  - Video Level . . . 26
  - Sensor Scan Mode . . . 27
  - Electronic Image Stabilization . . . 27
  - Image Enhancement . . . 28

Low Lux Noise Reduction . . . 28
Wide Dynamic Range . . . 28
Motion Settings . . . 29
Auto Flip . . . 29
Proportional Pan . . . 29
Park Time . . . 30
Scan Speed . . . 30
Preset Freeze Frame . . . 30
Limit Stops . . . 30
Azimuth Zero . . . 31
Power Up . . . 32
Power Up Action . . . 32
Line Sync . . . 33
Presets . . . 34
Motion Detection . . . 37
Edit Schedule . . . 38
Patterns . . . 39
Zones . . . 40
Window Blanking . . . 41
Edit Schedule . . . 42
Reverse . . . 42
Clear Window . . . 42
Blank All Above/Blank All Below . . . 43
Alarms . . . 44
Aux . . . 47
Edit Schedule . . . 47
Title Text . . . 48
Alert . . . 49
Repeat . . . 49
Ack Action . . . 49
Activate Aux . . . 50
Current Reading . . . 50
Reset Alert . . . 50
Clear . . . 51
Password . . . 51
Clock . . . 52
Event . . . 54
Event Type . . . 54
Event Label . . . 55
Edit Event Label . . . 55
Edit Event . . . 55
Clear Event . . . 56
List Event . . . 56
Holiday . . . 56
Edit Holiday . . . 56
Clear Holiday . . . 57
List Holidays . . . 57
Scheduled Events . . . 58

Reset, Cycle Power, Reboot . . . 59
Reset Camera . . . 59
Cycle Camera Power . . . 59
Reboot System . . . 59

Software/Language File Upload . . . 60

Maintenance . . . 61

Specifications . . . 62
23X Models . . . 62
27X Models . . . 63
35X Models . . . 64

Appendix . . . 65

Description

Spectra® IV SL and Spectra IV SE are Pelco's premier integrated dome systems. These systems feature a high resolution camera/optics package with configurable dome drive software.

This manual is designed primarily to be a reference tool for the installation and operation of your system. Inside you will find information about features and commands, as well as a detailed menu tree and a quick start guide.

Be sure to thoroughly familiarize yourself with the information in this manual before installing and using your system.

Installation

This manual contains installation instructions for the Spectra IV dome drive only. For complete installation instructions for a Spectra IV dome system, refer to the installation manual that was shipped with the back box.

SWITCH SETTINGS

Before installing the dome drive, you must configure the receiver address, termination, and baud setting. The DIP switches used to configure these settings are located on the base of the dome drive.

Figure 1 shows the default settings for the DIP switches. Switch SW1-1 (SW1, switch 1) is set to the ON position; all other switches are set to the OFF position.

Refer to the following sections to set the address, termination, and baud settings for the dome drive.

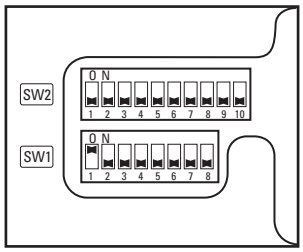


Figure 1. Default Switch Settings

SW1: RECEIVER ADDRESS

Set the SW1 switches for the address of the dome drive. The following information is required to set the dome drive address:

Pelco P-type control: The default address is 2. Refer to Table F on page 65 for address settings that use Pelco P-type control. The maximum number of receivers is 32.

Pelco D-type control: The default address is 1. Refer to Table G on page 66 for address settings that use Pelco D-type control. The maximum number of receivers is 254.

SW2 SWITCH 1: AD-32 PRESET SYSTEM

SW2-1 should be set to the ON position if an AD-32 controller and Pelco's TXB-AD translator board are used to control the dome system.

SW2 SWITCH 2: CM9502 SETTING

If a CM9502 matrix system is used with the dome drive, set SW2-2 to the ON position.

SW2 SWITCH 3: CONTROL SYSTEM COMPATIBILITY

Coaxial Control Systems

Although Spectra IV dome systems can operate with coaxial control systems from many manufacturers, the system is designed for optimal performance with Pelco Coaxitron® control products within the length specified for coaxial cable.

To compensate for coaxial control systems from other manufacturers, Pelco has provided DIP switch SW2-3. Setting SW2-3 to the ON position may improve dome control with these control systems.

If you are using a Pelco Coaxitron controller, leave SW2-3 in the default OFF position.

Notes:

- This coaxial control system compatibility feature is only available for dome drive revisions A4 and later (revisions A0 and later for Spectra IV Horizon dome drives). The revision number can be found on the barcode label on the top of the dome drive. Software version 1.090 and later indicates this mode is available by placing an asterisk next to the switch number in the Dip Switch Information menu.
- In some configurations, Pelco CM9502 Series matrix systems use nonstandard Coaxitron commands for functions like pattern playback. If you experience problems with these functions, set SW2-3 to the ON position.

Pelco P Protocol Control Systems

To compensate for Pelco P protocol control systems from other manufacturers, set SW2-3 to the ON position. This may improve dome control with some of these control systems.

SW2 SWITCHES 4 AND 5: SERIAL PORT SETTINGS

RS-422 Setting (Default)

SW2-4 and SW2-5 should both be set to the OFF position for RS-422 setting.

For control, only two wires should be connected to the RX- and RX+ connectors on the circuit board inside the back box. For bidirectional control, four wires should be connected to the RX-, RX+, TX-, and TX+ connectors on the circuit board inside the back box.

RS-485, 4-Wire Setting

SW2-4 should be set to OFF and SW2-5 should be set to ON if a 4-wire serial port connection is used with RS-485.

Note: This setting is most commonly used with Pelco Endura® systems.

RS-485, 2-Wire Setting

SW2-4 and SW2-5 should both be set to the ON position if a 2-wire serial port connection is used with RS-485.

This setting is used to allow the Spectra dome system to transmit and receive commands on the same pair of wires. Only two wires should be connected to the RX- and RX+ connectors on the circuit board inside the back box.

SW2 SWITCHES 6 TO 8: BAUD SETTINGS

Pelco D-type controllers are set for 2400 baud. The default setting for the dome drive is 2400 baud. If you are using a Pelco D-type controller, do not reset SW2 switches 1 to 3 or SW2 switches 6 to 8.

Pelco P-type controllers can operate at 2400, 4800, and 9600 baud. Set the SW2 switches (6, 7, and 8), located on the base of the dome drive, to the same baud as the Pelco P-type controller.

Table A. Baud Settings

Switch Number	SW2-6	SW2-7	SW2-8
2400 Baud (default for Pelco D-type control)	Off	Off	Off
4800 Baud (default for Pelco P-type control)	On	Off	Off
9600 Baud	Off	On	Off

SW2 Switch 9: Coaxial/UTP Cable

SW2-9 should be set to the OFF position (default) if you are using coaxial cable. If you are using unsheilded twisted pair (UTP) cable, set SW2-9 to the ON position.

SW2 Switch 10: Termination Setting

When connecting more than one Spectra IV dome system to a single controller, terminate the unit farthest from the controller. Termination is only required for the last dome in the series.

The dome drive is shipped from the factory in the unterminated (OFF) position. To terminate the dome drive, set SW2-10 to the ON position.

Note: Dome termination is not required for Coaxitron control.

DOME DRIVE

To install the dome drive:

1. Align the blue and red tabs with the blue and red arrows on the hinged door inside the back box.
2. Push the tabs in. Insert one side and then the other side.
3. Continue pushing on the ends of the tabs until both sides click into place (refer to Figure 2).

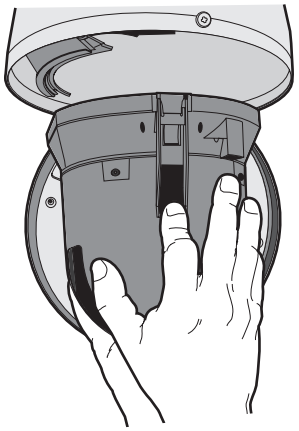


Figure 2. Dome Drive Installation

Note: When removing a dome drive that has been in use, caution should be taken to avoid direct contact with the top plate of the unit. This section of the unit will be warm to the touch when first removed from an operating unit.

4. Apply power to the Spectra IV dome system. The system will start a configuration sequence. When configuration is done, the following information is displayed:

   Pelco Spectra IV SL/Spectra IV SE

   Version X.XX

   D Address: 1

   P Address: 2

   Comm 2400, N, 8, 1

   CONFIGURE DONE

   This information will remain on the monitor until dome operation begins.

   Note: When installing a Spectra IV dome drive in a Spectra III™ back box for the first time, a message appears. When the installation is complete, the dome drive will continue with a normal configuration sequence.

Operation

QUICK OPERATION GUIDE

Pan and Tilt Move the joystick or press the direction keys left/right and up/down.

Zoom Far To zoom far:

1. Press the Zoom Tele button or turn the joystick clockwise until zoom stops at the optical zoom limit.
2. Release the button or joystick for one second.
3. To continue zooming (digitally), press the button or turn the joystick clockwise again until you have the picture you want or reach the digital zoom* limit.

Zoom Wide Press the Zoom Wide button or turn the joystick counterclockwise.

Scanning

Stop Scan	Preset 96
Random Scan	Preset 97
Frame Scan	Preset 98
Auto Scan	Preset 99

Presets Refer to the documentation supplied with THE control system.

Patterns† Refer to the documentation supplied with the control system.

Zones Refer to *Zones* on page 40 and to the documentation supplied with the control system.

Alarms Refer to *Alarms* on page 44.

Auto Flip Turn on or off in the camera menu. Refer to *Auto Flip* on page 29.

QUICK CONFIGURATION GUIDE

1. Configure preset 95 to access the main menu (refer to *Preset 95: Accessing Main Menu* on page 10).
2. Use the joystick to position the cursor beside menu selection.

   Note: If your controller does not have a joystick, use the up or down key.
3. Press Iris Open, the submenu/cursor moves to the right.
4. Move the joystick up or down to view selections.
5. Press Iris Open to make a selection.
6. Press Iris Close to cancel a selection.

*Digital zoom magnifies the image electronically and the picture may appear pixilated. The larger the digital zoom limit the greater the reduction in resolution.

†The dome cannot do electronic zoom in a pattern. Optical zoom will operate in a pattern.

PRESET 95: ACCESSING MAIN MENU

You can call up the main menu on your monitor by configuring (setting or creating) preset 95 (preset 28 in AD-32 preset mode).

Configuring preset 95 for Pelco's controllers varies according to the type of controller you are using. Instructions for configuring preset 95 are given below for various Pelco controllers.

CM6700/CM6800

1. Enter the number of the Spectra IV dome system and press the CAM key.
2. Enter 95 and hold the PRESET key for two seconds.
3. In the Edit Preset menu, go to SET and press the ACK key. The main menu appears.

KBD200A/KBD300A: Direct Mode Only

1. Enter 95.
2. Hold the PRESET key (approximately five seconds) until the main menu appears on the screen.

CM9500

1. Enter the number of the Spectra IV dome system and press the CAM key. The main menu appears.
2. Highlight SETUP in the main menu and press the SELECT key.
3. Highlight CAM in the Setup menu and press the SELECT key.
4. Highlight PRESET in the Camera menu and press the SELECT key.
5. Enter 95 and press the F1 key. The main menu appears.

CM9740/CM9760/CM9770/CM9780

1. Press the ESCAPE key to open the main menu. Select DEF. The Define submenu appears.
2. Enter your four-digit PIN *if this is your first time entering this mode.*
3. Enter 95 and select PRST. The main menu appears.
4. Select the Quit icon to return to the default menu.

KBD4000/KBD4002

1. Press the SPOT MONITOR key.
2. Enter 95, then hold the PRESET key (approximately five seconds) until the main menu appears on the screen.

MPT9500

Extended Coaxitron or RS-485 Mode

1. Enter 95 and press the PRESET SET key.
2. Press the F2 key. The main menu appears.

NET300/NET350/NET4001A

1. Check the Set box.
2. Click the preset 95 button. The main menu appears.

ENDURA WORKSTATION

1. Right-click in the video pane of the Spectra IV dome system.
2. Click Preset and then click Select Preset.
3. Enter 95 and then click OK.

VCD5000

1. Enter 95 for the preset action. The shortcuts menu appears.
2. Press the Preset button on the KBD5000.

DX4100/DX4500/DX4600/DX8100

1. Click the PTZ button on the toolbar. The PTZ control appears.
2. Click the Program button on the PTZ control. The main menu appears.

DIGITAL SENTRY® SYSTEM SOFTWARE

1. Click the PTZ tab.
2. Click the right or left arrows below the Go to Preset button until Go to Preset 95 appears on the button.
3. Click the Go to Preset 95 button. The main menu appears.

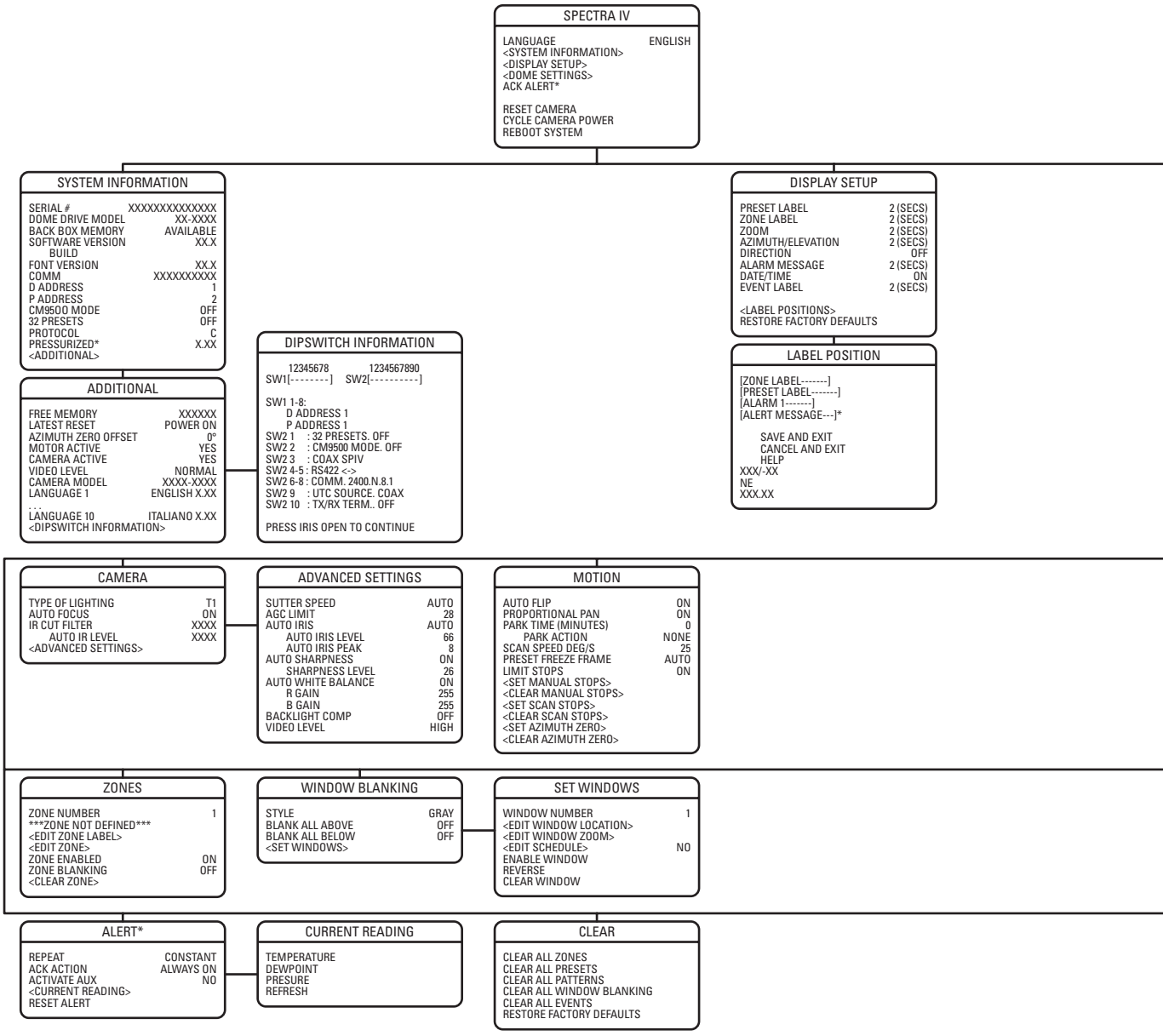
DIGITAL SENTRY DS CONTROLPOINT

1. Click the PTZ Controls icon. The PTZ Control tab appears below the PTZ video frame.
2. Click the up and down arrows to display 95 in the Preset Name text box.
3. Click the Call button. The main menu appears.

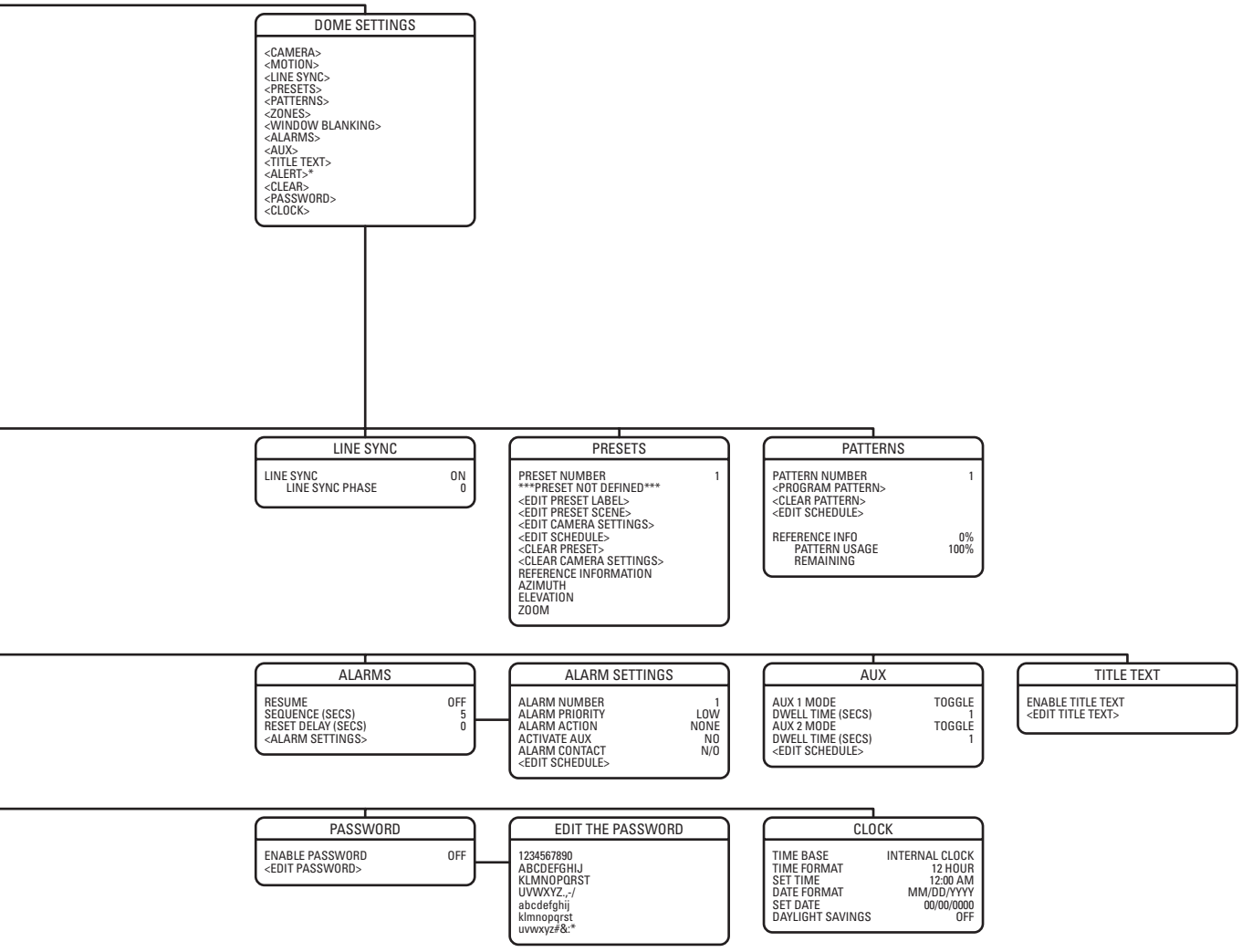
DVR5100

1. While in live view mode, select a video pane that is displaying video from a Spectra IV dome system.
2. From the Main menu, click Actions. The Actions menu appears.
3. From the Actions menu, click PTZ Operations. The PTZ Operations dialog box appears.
4. In the PTZ Operations dialog box, type **95** in the text box, and then click Presets. The main menu appears.

23X LowLight Day/Night Menu Tree



*This setting applies only to Pressurized Spectra IV dome systems. Spectra IV systems that are not pressurized will not display this menu item.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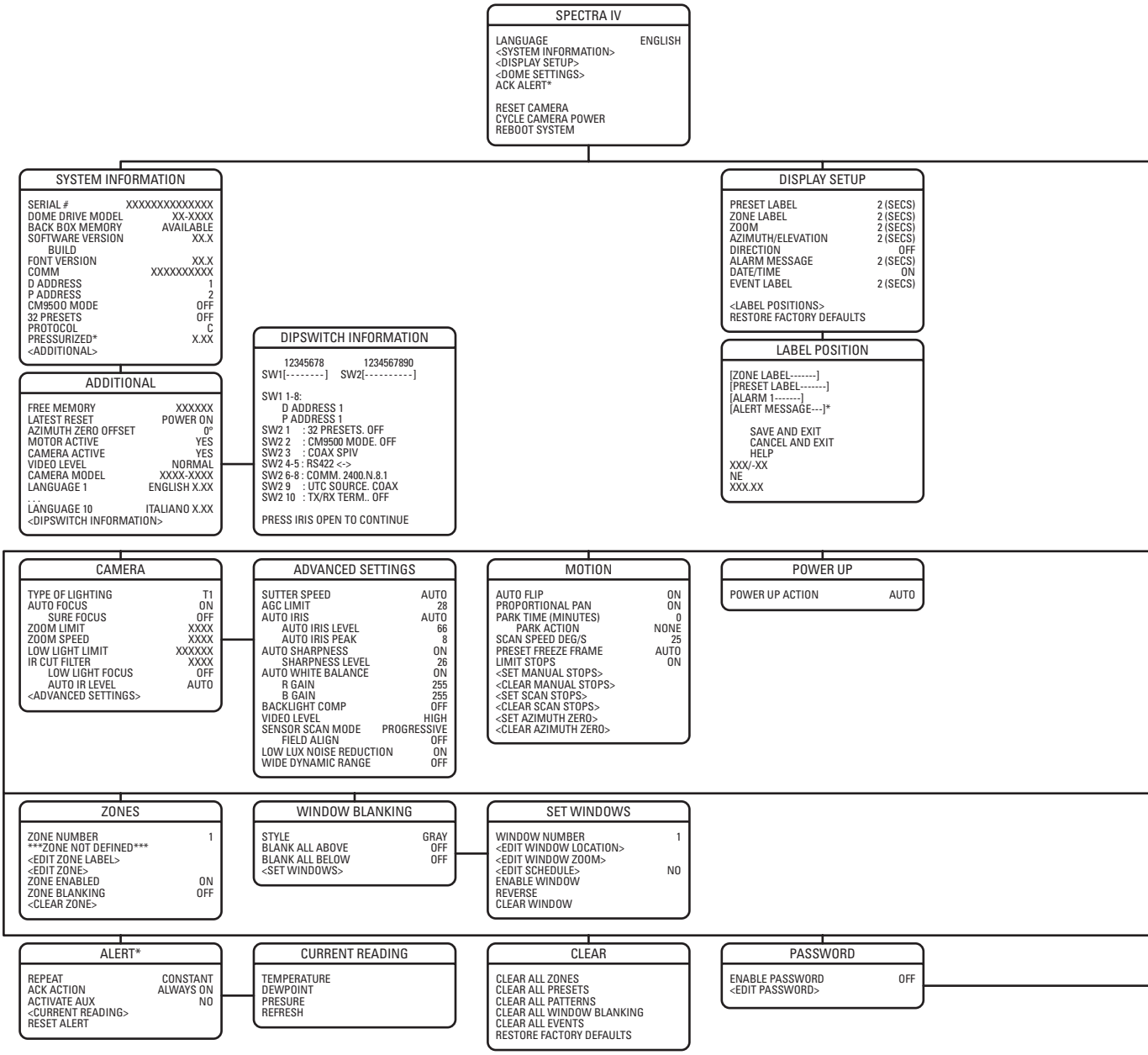
UVWXYZ.,-,/
abcdefghij
klmnopqrst
uvwxyz#&:*
CLOCK
TIME BASE INTERNAL CLOCK
TIME FORMAT 12 HOUR
SET TIME 12:00 AM
DATE FORMAT MM/DD/YYYY
SET DATE 00/00/0000
DAYLIGHT SAVINGS OFF

27X LowLight Day/Night Menu Tree



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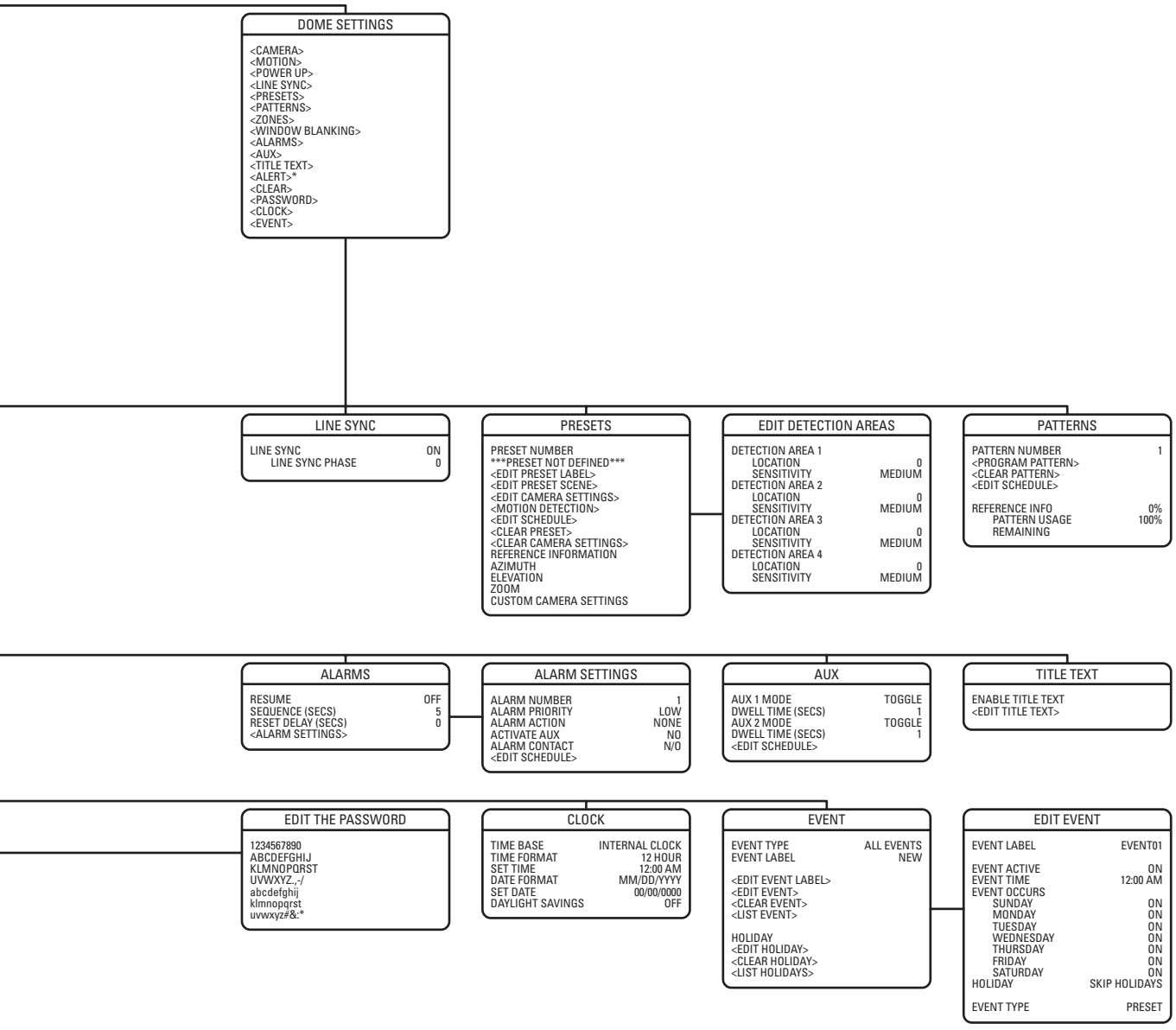
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LOCATION 0
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SATURDAY ON
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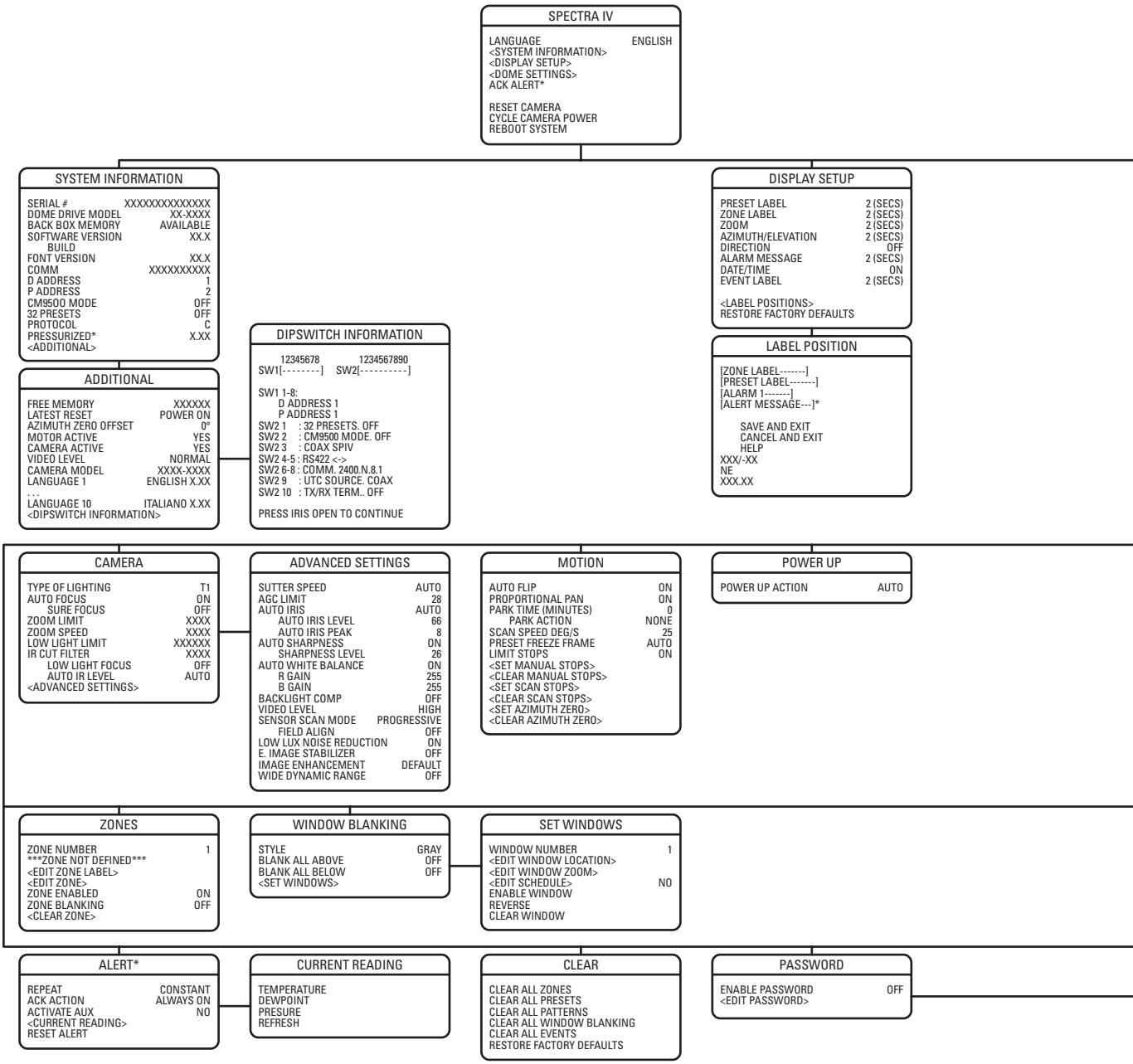
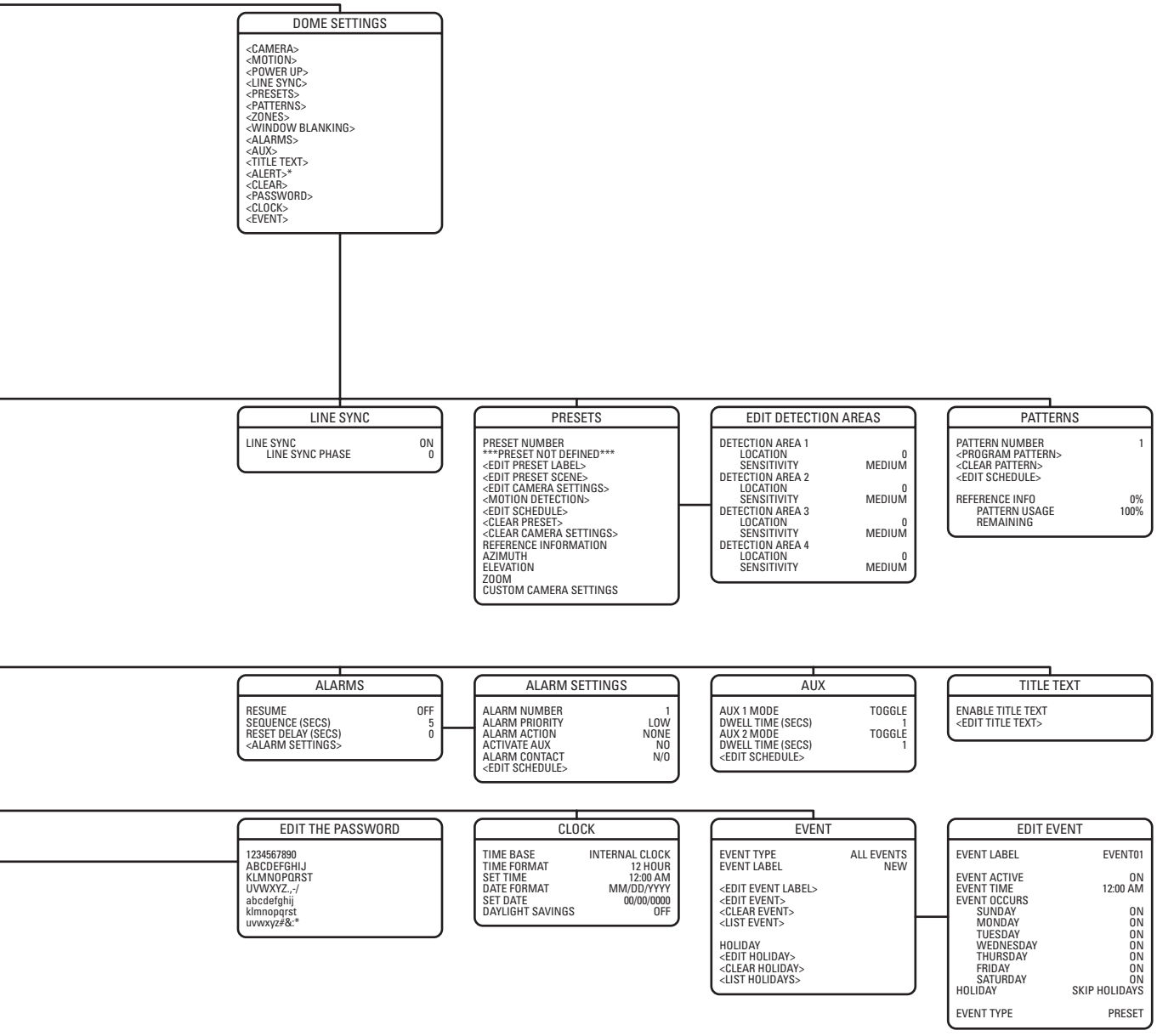
EVENT TYPE PRESET

35X LowLight Day/Night Menu Tree



*This setting applies only to Pressurized Spectra IV dome systems. Spectra IV systems that are not pressurized will not display this menu item.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DETECTION AREA 2
LOCATION 0
SENSITIVITY MEDIUM
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ALARMS
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ALARM CONTACT N/O
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DWELL TIME (SECS) 1
AUX 2 MODE TOGGLE
DWELL TIME (SECS) 1
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KLMNOPQRST
UVWXYZ.,-/
abcdefghij
klmnopqrst
uvwxyz#&:*
CLOCK
TIME BASE INTERNAL CLOCK
TIME FORMAT 12 HOUR
SET TIME 12:00 AM
DATE FORMAT MM/DD/YYYY
SET DATE 00/00/0000
DAYLIGHT SAVINGS OFF
EVENT
EVENT TYPE ALL EVENTS
EVENT LABEL NEW
<EDIT EVENT LABEL>
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EVENT TIME 12:00 AM
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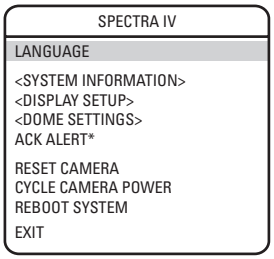
HOLIDAY SKIP HOLIDAYS
EVENT TYPE PRESET

Language



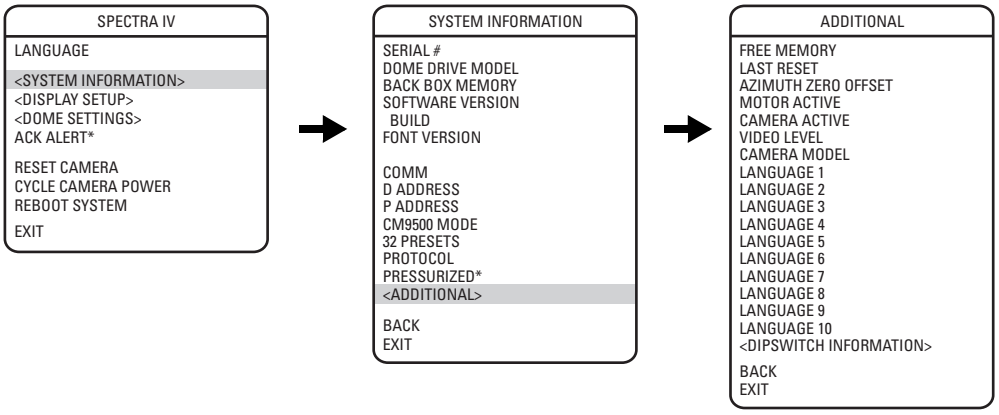
The language for the on-screen menus is selectable. Available languages include English, Spanish, French, German, Italian, Portuguese, Russian, Polish, Turkish, and Czech. The factory default language is English.

To change the display language:

1. Use the joystick to position the cursor beside LANGUAGE.
2. Press Iris Open. The cursor moves to the right, beside the current, selected language.
3. Move the joystick up or down to view selections. Press Iris Open to enter selection. All on-screen menus are changed to the selected language.

*This setting applies only to Pressurized Spectra IV dome systems.

System Information



The System Information menu displays the dome drive model, software version, available memory, DIP switch information, and other diagnostic information.

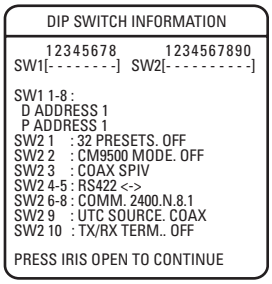
System settings cannot be changed using this menu; this information is for reference only.

Use the following steps to display the System Information menu:

1. Use the joystick to position the cursor beside SYSTEM INFORMATION.
2. Press Iris Open. The SYSTEM INFORMATION menu opens.

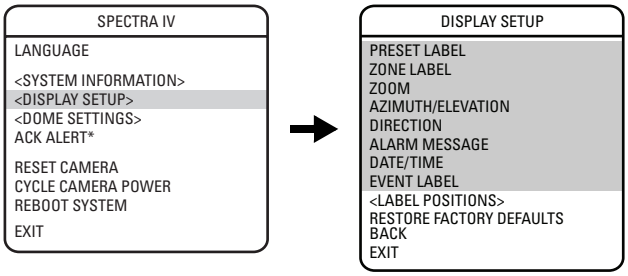
DIP SWITCH INFORMATION

The DIP Switch Information menu displays the dome drive's current DIP switch settings. This provides a way to remotely view the DIP switch settings without removing the dome drive from the back box.


DIP SWITCH INFORMATION
12345678 1234567890
SW1[--------] SW2[----------]
SW1 1-8 :
D ADDRESS 1
P ADDRESS 1
SW2 1 : 32 PRESETS. OFF
SW2 2 : CM9500 MODE. OFF
SW2 3 : COAX SPIV
SW2 4-5 : RS422 <->
SW2 6-8 : COMM. 2400.N.8.1
SW2 9 : UTC SOURCE. COAX
SW2 10 : TX/RX TERM.. OFF
PRESS IRIS OPEN TO CONTINUE

*This setting applies only to Pressurized Spectra IV dome systems.

Display Setup



Display setup allows you to configure how labels are displayed on the monitor. The following labels are available:

PRESET LABEL: Identifies preset.

ZONE LABEL: Identifies zone.

ZOOM: Identifies the amount of magnification.

AZIMUTH†/ELEVATION‡: Amount of pan from zero degrees vertical and the amount of tilt from zero degrees horizontal.

DIRECTION: Displays compass direction.

ALARM MESSAGE: Displays activated alarm.

DATE/TIME: Displays current date and time.

EVENT LABEL: Displays activated event.

A preset label is displayed when a preset is called. A zone label is displayed when the system moves into a zone. The zoom ratio label is displayed when zoom is activated. Azimuth/elevation and direction labels are displayed when pan/tilt is activated. An alarm message appears on the monitor when an alarm occurs. An event label appears on the monitor when an event occurs.

The following settings are available for each label except date and time:

OFF: Label is not displayed when activated.

CONSTANT: The label is continually displayed when activated.

2 SECONDS: The label is displayed for 2 seconds after activation.

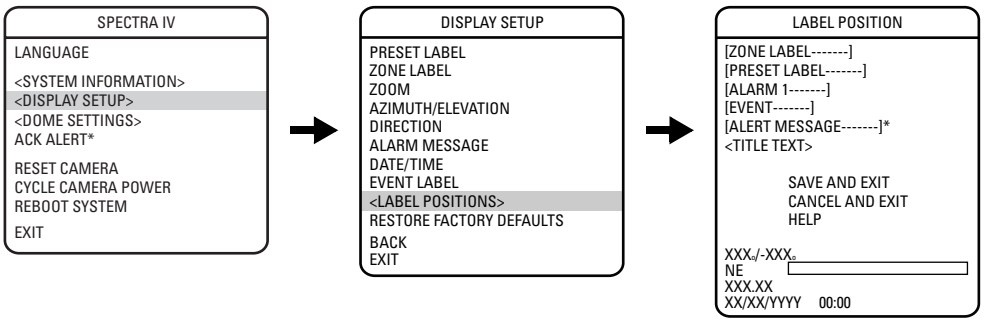
5 SECONDS: The label is displayed for 5 seconds after activation.

10 SECONDS: The label is displayed for 10 seconds after activation.

The settings for date and time are ON or OFF.

*This setting applies only to Pressurized Spectra IV dome systems.
† Azimuth is the pan angle from zero to 359 degrees.
‡ Elevation is the tilt position from zero (horizon) to -90 degrees.

LABEL POSITIONS



Labels can be placed anywhere on the monitor. This feature allows you to customize the appearance of your monitor screen.

The following labels are not set at fixed positions:

PRESET LABEL

ZONE LABEL

ALARM 1

ZOOM RATIO - XXX.XX

AZIMUTH†/ELEVATION‡ - XXX°/-XX°

DIRECTION - NE

ALERT MESSAGE§*

TITLE TEXT

EVENT LABEL

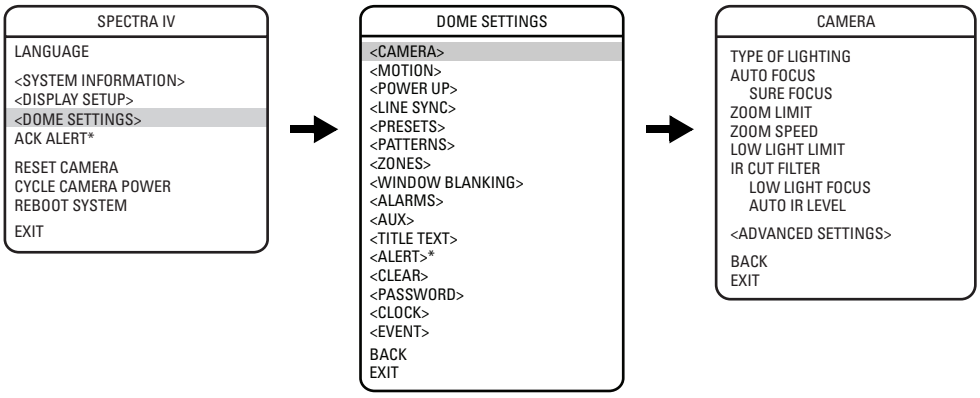
To set a label position:

1. Use the joystick to position the cursor beside a label.
2. Press Iris Open.
3. Use the joystick to move the label up, down, left, or right.
4. Press Iris Open.
5. Repeat steps 1 to 4 to position other labels.
6. Position the cursor next to Save and Exit. Press Iris Open to save settings and exit the menu.

*This setting applies only to Pressurized Spectra IV dome systems.
† Azimuth is the pan angle from zero to 359 degrees.
‡ Elevation is the tilt position from zero (horizon) to -90 degrees.
§ The alert message is the warning displayed on the monitor if pressure, temperature, or dew point inside the dome reach unacceptable levels.

Dome Settings

CAMERA



TYPE OF LIGHTING

Pelco has calibrated settings that optimize the white balance and the picture for several lighting conditions. There are two settings:

T1 (default): For use in outdoor applications.

T2: For use in indoor applications.

AUTO FOCUS

Auto focus allows the lens to remain in focus during zoom-in, zoom-out, and motion functions.

There are two auto focus settings:

ON (default): If auto focus mode is set to ON, the camera will focus automatically when using pan, tilt, and zoom (PTZ) functions.

OFF: Focus is operated manually. To focus, press the Focus Far or Focus Near button on the controller.

Sure Focus

(Applies only to 27X and 35X models.)

When sure focus is enabled and all PTZ motions are stopped, the camera will attempt to find a fixed focus position and lock to an object in the scene. If a focus lock is acquired or a specific amount of time has expired with no focus lock, the focus position remains fixed until PTZ is resumed.

ZOOM LIMIT

(Applies only to 27X and 35X models.)

Zoom limit allows the user to define a limitation on the amount of telephoto zoom. The settings vary depending on camera model.

23X (Models DD423 and DD423-X)

The default setting is 32X. The zoom limit cannot be changed for 23X models.

27X (Models DD427 and DD427-X)

The default setting is 54X. Cameras with 324X zoom (27X optical zoom and 12X digital zoom) can be set for 27X, 54X, 108X, 216X, 270X, or 324X.

35X (Models DD4CBW35 and DD4CBW35-X)

The default setting is 70X. Cameras with 420X zoom (35X optical zoom and 12X digital zoom) can be set for 35X, 70X, 140X, 280X, 350X, or 420X.

*This setting applies only to Pressurized Spectra IV dome systems.

ZOOM SPEED

(Applies only to 27X and 35X models.)

Zoom speed allows the user to define the speed at which the dome will go from full wide zoom to the optical zoom.

The zoom speed is set to 4.2 seconds and cannot be changed for 23X models.

Available zoom speed settings for 27X and 35X models include:

HIGH: 3.2 seconds

MEDIUM (default): 4.6 seconds

LOW: 6.6 seconds

Note: When using the HIGH setting, the image may be out of focus until zooming stops.

LOW LIGHT LIMIT

(Applies only to 27X and 35X models.)

Low light limit is the maximum duration, in fractions of a second, that the electronic shutter will remain open in low light conditions. The default setting is 2. Refer to Table B for available settings.

Table B. Low Light Limit Settings

Setting	Duration of Open Electronic Shutter
2 (default)	1/2 second
4	1/4 second
8	1/8 second
15	1/15 second
30	1/30 second
60	1/60 second

IR CUT FILTER

Spectra IV dome systems have two modes of operation: color, and black-white. You can increase sensitivity in low light conditions by switching to black-white mode (removing the IR cut filter). Color mode is preferred in normal lighting conditions.

The following are the settings for the IR cut filter:

OFF: Manual operation is controlled by preset 88 (filter IN) and 89 (filter OUT).

AUTO (default): Automatic operation is controlled by the auto IR level setting.

IN: Images are always displayed in color mode.

OUT: Images are always displayed in black-white mode.

Note: The IN and OUT settings are only available when editing camera settings through the Presets menu (refer to *Presets* on page 34).

Low Light Focus

(Applies only to 27X and 35X models.)

If you are using an IR illuminator, the low light focus feature of the camera can be tuned to correspond to the setting of the illuminator.

There are three low light focus settings:

OFF (default): Low light focus is not activated.

850NM: Low light focus is tuned to 850 nm (nanometers).

950NM: Low light focus is tuned to 950 nm.

Auto IR Level

The auto IR level is the light level at which the infrared filter switches IN or OUT.

Following are the available settings for the auto IR level:

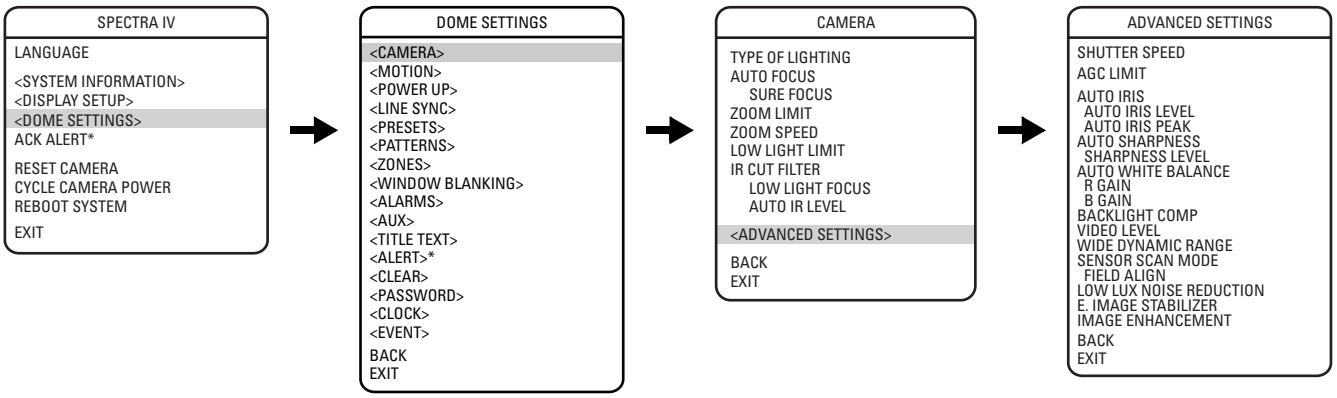
DUSK (default): Approximately 6 lux (black-white); approximately 13 lux (color).

DARK: Approximately 0.1 lux (black-white); approximately 2 lux (color).

Notes:

- If backlight compensation is ON and the IR cut filter switches OUT in normal lighting conditions, adjust the Auto IR Level to a darker setting. Refer to *Backlight Compensation* on page 26.
- *Low light* does not mean *no light*. Some type of illumination is required (street light, IR light, etc.). The camera is not sensitive to IR light when the IR cut filter is IN.

ADVANCED CAMERA SETTINGS



SHUTTER SPEED

Shutter speed is the duration of the electronic shutter. You can configure the shutter speed to operate automatically (Auto) or manually (Numeric Value).

AUTO (default): The electronic shutter speed is set automatically by the amount of light sensed by the camera.

NUMERIC VALUE: Spectra IV dome systems have several numerical shutter speed settings. The higher the number, the faster the electronic shutter.

The slowest shutter speed setting is 2 = 1/2 second.

The fastest setting is 30,000 = 1/30,000 second.

Increasing the shutter speed lowers the light sensitivity and reduces the streaking of fast moving objects.

Set the shutter speed to 100 if you are using an NTSC camera in a 50 Hz environment. This will eliminate any flicker that may occur in the picture.

AGC LIMIT

AGC limit allows users to adjust how the system balances AGC (automatic gain control) and electronic shutter in low light conditions. As scene lighting decreases, the system will automatically adjust, adding a mixture of AGC and slow shutter according to the AGC limit setting. AGC limit can be set between 0 and 40, with 40 applying maximum AGC before slow shutter. In contrast, setting AGC limit to 0 will force the system software to apply maximum slow shutter (as defined by the low light limit setting) before any AGC is applied. The default AGC settings vary depending on camera model.

Note: The maximum slow shutter that the system will achieve is 1/2 second shutter (refer to *Low Light Limit* on page 23).

AUTO IRIS

Auto iris is the lens function that automatically opens and closes the iris in response to changing light conditions.

You can configure the auto iris to operate automatically or at a user-defined level.

OFF: Auto iris is disabled, and control is always manual.

AUTO (default): The iris is adjusted automatically to produce a constant video output as determined by the auto iris level setting.

If auto iris is in the auto mode, it will remain that way until the iris is manually opened or closed. The dome will return to auto mode when it is panned or tilted more than 15 degrees.

Auto Iris Level

Auto iris level is the numeric value the auto iris uses to maintain the brightness level of the camera. Increase the value to brighten the scene. Decrease the value to darken the scene. This setting can be adjusted if the video level in the auto iris mode is too bright or too dark.

Note: If backlight compensation is ON, decrease the auto iris level setting.

*This setting applies only to Pressurized Spectra IV dome systems.

Auto Iris Peak

Increasing the peak value will cause the auto iris circuit to react more to highlights or "peaks" in the picture. Decreasing this value will cause it to use the average video level to adjust the iris.

AUTO SHARPNESS

Auto sharpness enhances picture detail by increasing the aperture gain of the camera and sharpening the edges in the picture.

There are two settings:

ON (default): The camera automatically maintains a normal sharpness mode.

OFF: The sharpness of the picture is set manually by configuring the sharpness level. Sharpness level settings range from 0 to 63.

AUTO WHITE BALANCE

This feature automatically processes the viewed image to retain color balance over a color temperature range. The default setting for auto white balance is ON.

R GAIN: Adjusts the picture output in the red range. As you change the value, you will see the color change on your monitor.

B GAIN: Adjusts the picture output in the blue range. As you change the value, you will see the color change on your monitor.

BACKLIGHT COMPENSATION

If a bright backlight is present, the subjects in the picture may appear dark or as a silhouette. Backlight compensation (BLC) enhances objects in the center of the picture. The dome uses the center of the picture to adjust the iris. If there is a bright light source outside of this area, it will wash out to white. The camera will adjust the iris so that the object in the sensitive area is properly exposed.

There are two backlight compensation settings:

OFF (default): Backlight compensation is not activated.

ON: Backlight compensation is activated.

If backlight compensation is ON, decrease the auto iris level setting and adjust the auto IR level to a darker setting. Refer to *Auto Iris Level* on page 25 and *Auto IR Level* section on page 24.

VIDEO LEVEL

Set the video output to one of the following options:

NORMAL: 1.0 Vp-p.

HIGH (default setting): 1.2 Vp-p. to compensate for losses in video cable.

SENSOR SCAN MODE

(Applies only to 27X and 35X models.)

Sensor scan mode controls the internal processing of the camera's image sensor. The data scanned from the image sensor at each field time is used for the internal image control algorithms and digital signal processing (DSP).

Note: When changing from PROGRESSIVE to INTERLACED, or vice-versa, the camera restarts to establish the new setting.

There are two sensor scan modes:

PROGRESSIVE (default): Produces a higher quality image by using each line scanned from the image sensor.

INTERLACED: Produces a slight increase in sensitivity by using blended data from pairs of lines scanned from the image sensor.

When sensor scan mode is set to INTERLACED, the wide dynamic range and image enhancement features are automatically disabled. There may be additional effects, such as a degradation of the signal-to-noise ratio, degradation of the color reproduction, and a loss of motion detection for presets configured with motion detection.

FIELD ALIGN

(Applies only to 27X and 35X models.)

Field align determines whether the camera produces progressive segmented frame output (PsF) or interlaced frame output. Analog video from the camera is always output in separate fields as required for compatibility. This feature allows PsF to be recombined by an encoding device without a time difference between fields, as is typically seen from interlaced analog video output. Enabling field align requires that the encoding device you are using always combines the odd and even fields in the specified order.

There are three field alignment settings:

OFF (default): Field alignment is disabled. Use this setting if you are using an analog device/system or a digital encoder that does not support PsF.

ODD: Arranges the odd field for a particular video frame before the even field for that frame.

EVEN: Arranges the even field for a particular video frame before the odd field for that frame.

Notes:

- If you enable field alignment by selecting ODD or EVEN, you must disable any deinterlacing settings for the encoding device to achieve maximum resolution.
- The ODD and EVEN settings require that the sensor scan mode is set to PROGRESSIVE. If field align is set to ODD or EVEN, the sensor scan mode automatically changes to PROGRESSIVE.

ELECTRONIC IMAGE STABILIZATION

(Applies only to 35X models.)

Electronic image stabilization is a feature of the camera that can compensate for some forms of external influences. In all cases, care should be taken to make sure that any dome system is mounted to a rigid location.

In the event that vibration is introduced to the dome system, a user can select one of the electronic image stabilization settings in the menu. The available settings are OFF, 5 Hz, and 10 Hz. Users should apply each of the settings to the camera to see which one best addresses the vibration that is affecting the video quality.

Electronic image stabilization will not correct for all ranges of vibration. If either of the settings fails to eliminate the vibration seen in the video, other measures should be taken to isolate the vibration or to seek a more rigid mounting location.

Notes:

- When electronic image stabilization is applied, digital slow shutter and wide dynamic range are disabled. Zoom, image resolution, and viewing angle are also limited when this feature is activated.
- Electronic image stabilization cannot be used while in a preset that has motion detection activated.

IMAGE ENHANCEMENT

(Applies only to 35X models.)

The image enhancement feature improves the definition of objects, lines, or text in high contrast areas, making them appear sharper.

There are two image enhancement settings:

DEFAULT: Image enhancement is not activated.

ENHANCED: Image enhancement is activated.

⚠ **Warning:** When using this feature be aware that picture noise, although unnoticeable to the eye, will increase and may cause compression rate changes in DVRs, NVRs, and network devices.

LOW LUX NOISE REDUCTION

(Applies only to 27X and 35X models.)

Low lux noise reduction helps to reduce video noise in low light scenes. When enabled, low lux noise reduction is directly affected by the AGC settings for the dome system.

The following are the low lux noise reduction settings:

ON (default): Low lux noise reduction is enabled. As the scene darkens and AGC increases, the noise reduction effect automatically increases. As noise reduction increases, you may also notice some afterimaging and a slight reduction in color saturation.

OFF: Low lux noise reduction is disabled.

WIDE DYNAMIC RANGE

(Applies only to 27X and 35X models.)

Wide dynamic range (WDR) balances the brightest and darkest sections of a scene to produce a picture that is better balanced in lighting and provides more detail.

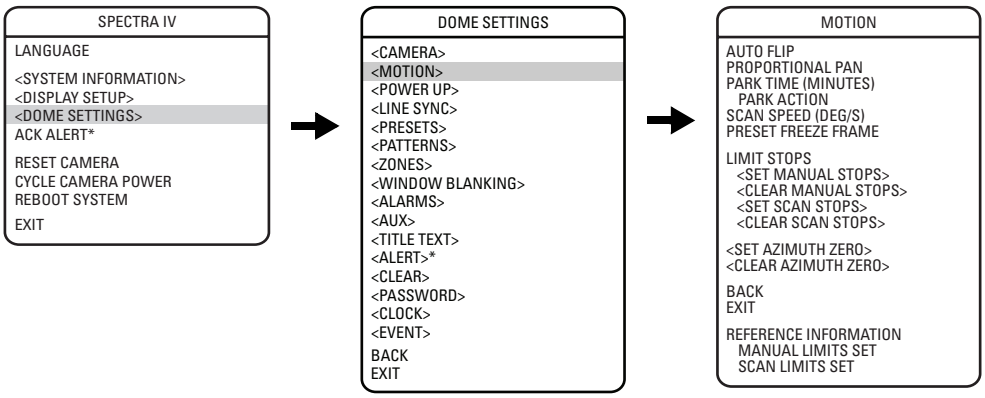
Available settings are OFF and ON; the default setting is OFF. When wide dynamic range is set to ON the frame rate is reduced from the standard 30 to 15 frames per second (fps). Also, when this setting is ON the iris will not close completely, even in manual mode.

Note: Wide dynamic range is disabled when electronic image stabilization is set to 5 Hz or 10 Hz.

Wide Dynamic Range ON **Wide Dynamic Range OFF**

Figure 3. Wide Dynamic Range Settings

MOTION SETTINGS



AUTO FLIP

When the camera tilts downward and goes just beyond the vertical position, the dome rotates 180 degrees. When the dome rotates (flips), the camera starts moving upward as long as you continue to hold the joystick in the down position. Once you let go of the joystick after the dome rotates, joystick control returns to normal operation. The auto-flip feature is useful for following a person who passes directly beneath the dome.

There are two auto flip modes:

ON (default): Auto flip mode is enabled.

OFF: Auto flip mode is disabled.

PROPORTIONAL PAN

Proportional pan automatically reduces or increases the pan and tilt speeds in proportion to the amount of zoom. At telephoto zoom settings, the pan and tilt speeds will be slower for a given amount of joystick deflection than at wide zoom settings. This keeps the image from moving too fast on the monitor when there is a large amount of zoom.

There are three proportional pan modes:

ON (default): Enables the proportional pan mode.

OFF: Disables proportional pan mode. The pan speed will not depend on the amount of zoom.

2X: Increases the speed of the proportional pan mode to twice that used when proportional pan is set to ON.

*This setting applies only to Pressurized Spectra IV dome systems.

PARK TIME

This feature allows the dome to begin a specified operation (scan, preset, or pattern) after a configured period of inactivity.

Park time can be configured from 1 to 720 minutes (12 hours), or set to zero, which disables this feature. The default setting is zero.

Park Action

This feature will define the activity when the dome parks. The following settings are available:

NONE (default): No action.

AUTO SCAN: Dome starts auto scan operation.

RANDOM SCAN: Dome starts random scan operation.

FRAME SCAN: Dome starts frame scan operation.

PRESET 1: Dome goes to preset 1.

PRESET 8: Dome goes to preset 8.

PATTERN 1: Dome runs pattern 1.

PATTERN 2: Dome runs pattern 2.

PATTERN 3: Dome runs pattern 3.

PATTERN 4: Dome runs pattern 4.

PATTERN 5: Dome runs pattern 5.

PATTERN 6: Dome runs pattern 6.

PATTERN 7: Dome runs pattern 7.

PATTERN 8: Dome runs pattern 8.

(Only 27X and 35X models allow PATTERN 2 through PATTERN 8.)

SCAN SPEED

Scan speed is the degrees per second that the dome will pan when in a scan mode. Scan speed is adjustable from 1 to 40 degrees per second through the camera menu. The default setting is 25 degrees per second.

PRESET FREEZE FRAME

This feature freezes the scene on the monitor when going to a preset. This allows for smooth transition from one preset scene to another. Preset freeze frame also reduces bandwidth when used with digital network systems such as PelcoNet™ and guarantees that blanked areas will not be revealed when going to a preset.

There are three preset freeze frame settings:

ON: The image on the screen freezes when a preset is called. When the dome reaches the preset, the image is unfrozen and the preset scene is displayed.

OFF: The image is never frozen.

AUTO (default): Freeze frame is turned on automatically if window blanking is ON. If window blanking is OFF, freeze frame is off.

LIMIT STOPS

Limit stops are configurable stops that limit the pan range of the dome. There must be two limits, a left and a right, to define an area.

There are two types of limit stops:

MANUAL: A manual (joystick) pan operation stops when a limit stop is reached.

SCAN: The dome reverses direction during random, frame, or auto scanning when a limit stop is reached.

To set manual or scan stops:

1. Use the joystick to position the cursor beside SET MANUAL STOPS or SET SCAN STOPS.
2. Press Iris Open.
3. Follow the directions displayed on the monitor.

Note: In order for the manual or scan stops to work, the LIMIT STOPS option must be ON.

To clear manual or scan stops:

1. Use the joystick to position the cursor beside CLEAR MANUAL STOPS or CLEAR SCAN STOPS.
2. Press Iris Open.
3. Follow the directions displayed on the monitor.

AZIMUTH ZERO

Azimuth is the pan angle from zero to 359 degrees. Azimuth zero is the pan position you specify to be the zero degree point. Azimuth zero is normally set to magnetic north. Once set, azimuth and compass readings are based on the set Azimuth Zero point.

To configure azimuth zero:

1. Use the joystick to position the cursor beside SET AZIMUTH ZERO.
2. Press Iris Open.
3. Follow the directions displayed on the monitor.

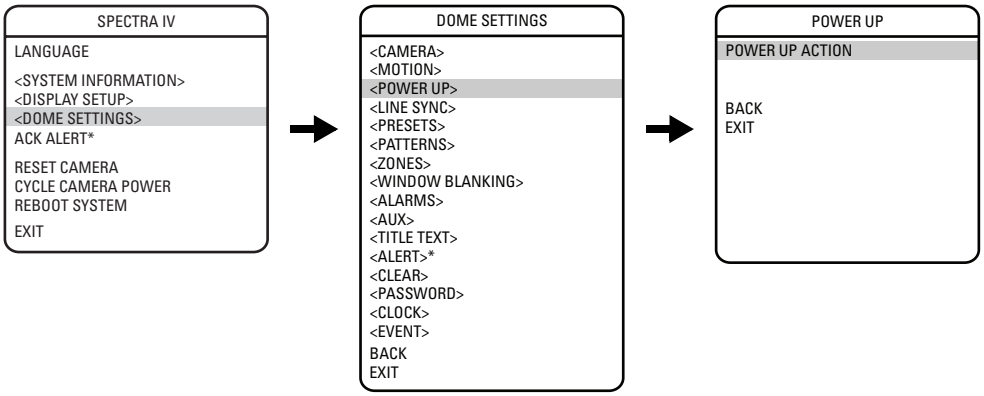
To clear azimuth zero:

1. Use the joystick to position the cursor beside CLEAR AZIMUTH ZERO.
2. Press Iris Open.
3. Follow the directions displayed on the monitor.

POWER UP

(Applies only to 27X and 35X models.)

POWER UP ACTION



This setting defines a specific activity (scan, preset, pattern) to be performed in the event the power to the dome is cycled.

The following settings are available:

NONE: No action.

AUTO (default): The dome resumes its prior activity or direction before the power outage.

AUTO SCAN: Dome starts auto scan operation.

RANDOM SCAN: Dome starts random scan operation.

FRAME SCAN: Dome starts frame scan operation.

PRESET 1: Dome goes to preset 1.

PRESET 2: Dome goes to preset 2.

PRESET 3: Dome goes to preset 3.

PRESET 4: Dome goes to preset 4.

PRESET 5: Dome goes to preset 5.

PRESET 6: Dome goes to preset 6.

PRESET 7: Dome goes to preset 7.

PRESET 8: Dome goes to preset 8.

PATTERN 1: Dome runs pattern 1.

PATTERN 2: Dome runs pattern 2.

PATTERN 3: Dome runs pattern 3.

PATTERN 4: Dome runs pattern 4.

PATTERN 5: Dome runs pattern 5.

PATTERN 6: Dome runs pattern 6.

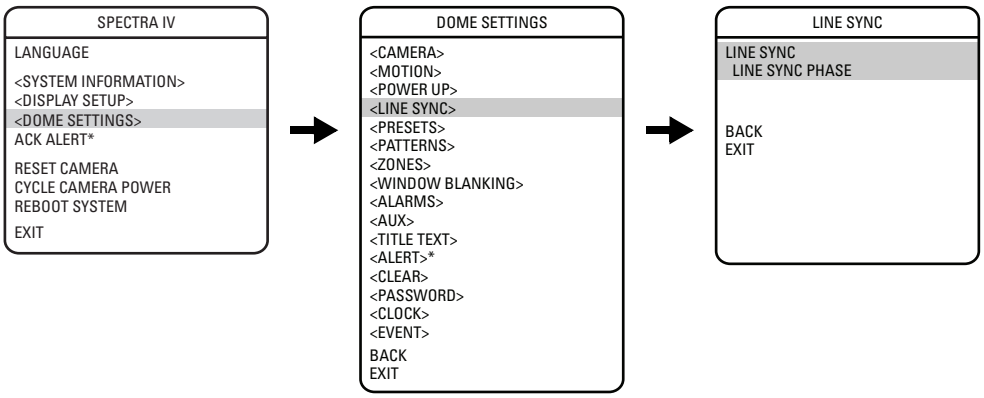
PATTERN 7: Dome runs pattern 7.

PATTERN 8: Dome runs pattern 8.

(Only 27X and 35X models allow PATTERN 2 through PATTERN 8.)

*This setting applies only to Pressurized Spectra IV dome systems.

LINE SYNC



Line sync refers to a configurable function that allows you to synchronize all cameras within a matrix system.

Spectra IV dome systems automatically sense V-Sync input. No line sync setup is required for Pelco control systems that provide a V-Sync signal.

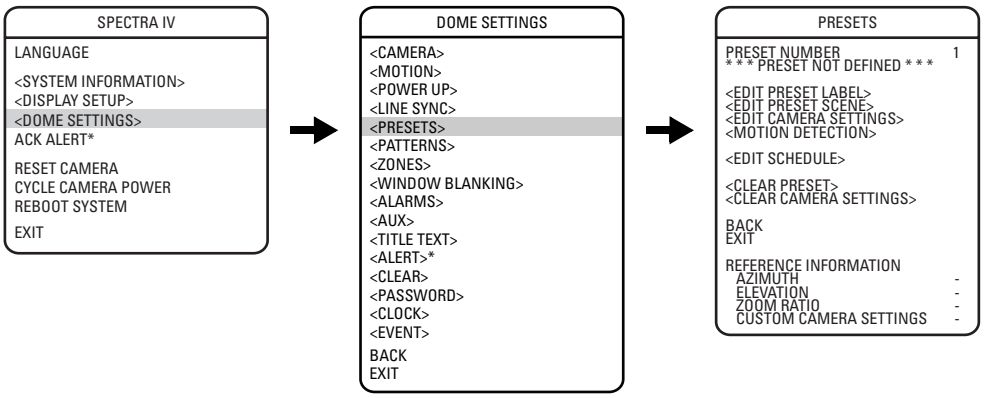
For matrix systems that do not output V-Sync, there are two settings for line synchronization:

ON (default): Adjusts the phase of the line sync to synchronize input power. Line sync phase settings range from zero to 359 degrees.

OFF: The dome synchronizes to the internal clock.

*This setting applies only to Pressurized Spectra IV dome systems.

PRESETS



The model of the back box you are using limits the number of configurable presets that can be stored and retrieved in the back box memory. If you are using an older model back box, you may configure and use up to the maximum number of presets available to the dome drive. However, if the dome drive is changed, the back box model will limit the number of stored presets available to the new dome drive (refer to Table C).

Table C. Stored Presets by Back Box Model

Back Box Series	**Model**	**Number of Stored Presets**	
		Spectra/Spectra SL	*Spectra SE*
Spectra III	BB53	99	15
Spectra IV	BB4	64	256

The Spectra IV SL dome system, which includes 23X models, has 64 preset positions. The presets that can be configured are numbered 1 to 32 and 35 to 64.

The Spectra IV SE dome system, which includes 27X and 35X models, has 256 preset positions. The presets that can be configured are numbered 1 to 32, 35 to 82, and 100 to 256.

Note: The number of available presets may be limited by the head-ins, controllers, and DVRs that are connected to your dome system.

Each of the user-definable presets can be configured to use pan, tilt, camera settings, and motion detection.

The following presets are predefined for specific functions:

Preset 33: Flip command; pans the dome drive 180 degrees

Preset 34: Pan zero command; directs the dome drive to the factory-determined zero reference point

Preset 83 to 87: Reserved

Preset 88: IR filter IN (color)

Preset 89: IR filter OUT (black-white)

Preset 90 to 91: Manual limit stops

Preset 92 to 93: Scan limit stops

Preset 94: Reserved

Preset 95: Select main configuration menu

Preset 96: Stop a scan

Preset 97: Random scanning

Preset 98: Frame scanning

Preset 99: Start auto scanning

*This setting applies only to Pressurized Spectra IV dome systems.

Note: For American Dynamics™ controllers with only 32 presets, switch SW2-1 on the dome drive to the ON position. When SW2-1 is ON, several presets change (refer to Table D).

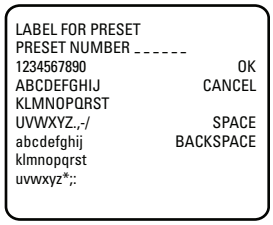
Table D. Presets for American Dynamics Controllers

Spectra IV Presets	American Dynamics Controller Presets
88	21
89	22
90	23
91	24
92	25
93	26
95	28
96	29
97	30
98	31
99	32

If the limit stops are turned off, presets 23 to 26 can be used as regular presets.

Use the following steps to configure a preset.

1. Select the preset number:
   a. Use the joystick to position the cursor beside PRESET NUMBER. Press Iris Open. The cursor moves to the right.
   b. Move the joystick up or down to view selections. Press Iris Open to enter selection.
2. Edit the preset label:
   a. Use the joystick to position the cursor beside EDIT PRESET LABEL.
   b. Press Iris Open. The following informations appears:



   c. Use the joystick to position the cursor beside a character. Press Iris Open to enter selection. To clear a character, position the cursor beside BACKSPACE, and then press Iris Open.
   d. When label is completed, move the cursor to OK. Press Iris Open to return to the Preset menu.
3. Edit the preset scene:
   a. Use the joystick to position the cursor beside EDIT PRESET SCENE.
   b. Press Iris Open.
   c. Follow the directions displayed on the monitor.

4. Edit preset camera settings:
   a. Use the joystick to position the cursor beside EDIT CAMERA SETTINGS.
   b. Press Iris Open. The EDIT CAMERA SETTINGS window appears. Refer to *Camera* on page 22 and *Advanced Camera Settings* on page 25 to change preset camera settings.
   c. To edit the camera settings schedule, use the joystick to position the cursor beside EDIT SCHEDULE. Press Iris Open.

      The Edit Schedule menu is a duplicate of the Edit Event menu (refer to *Event* on page 54) with the following exceptions. In the Edit Schedule menu, the event type cannot be changed. Also, the Holiday feature cannot be accessed from the Edit Schedule menu.

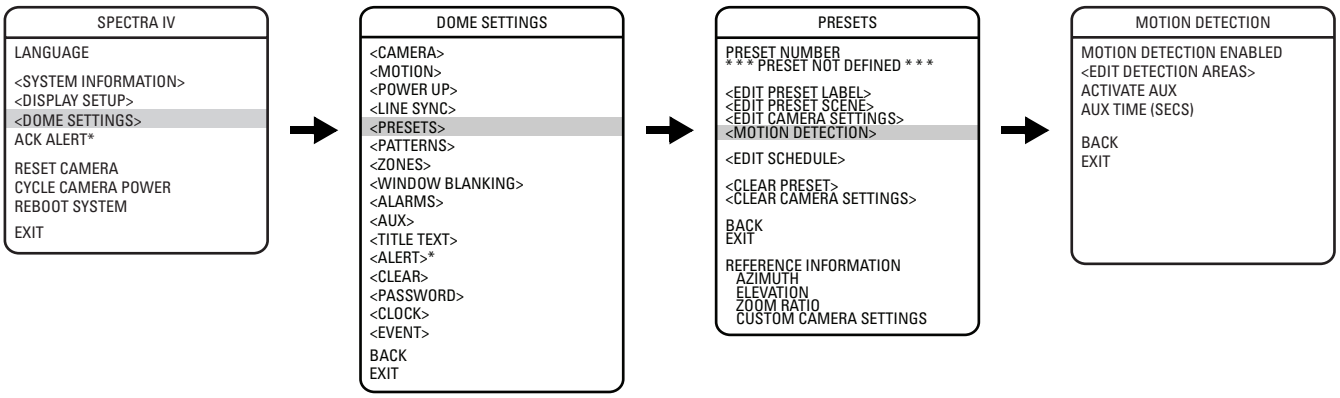
      For instructions on changing the features in the Edit Schedule menu, refer to *Edit Event* on page 55.

Notes:

- There are two additional options available for the IR cut filter that are only available when configuring a preset. The additional settings are IN and OUT. If the IR cut filter is set to IN, the preset scene will be in color. If the IR cut filter is set to OUT, the preset scene will be in black-white.
- You can copy camera settings from one preset to another preset. To copy camera settings do the following:
  (1) Use the joystick to position the cursor beside COPY CAMERA SETTINGS.
  (2) Press Iris Open. The cursor moves to the right.
  (3) Move the joystick up or down to view selections. Press Iris Open to enter selection.

MOTION DETECTION

(Applies only to 27X and 35X models.)



Enable Motion Detection

The following are the settings for motion detection:

OFF (default): Motion detection is turned off (disabled).

ON: Motion detection is turned on (enabled).

Note: Motion detection does not work if the shutter speed is set at less than 1/60 of a second.

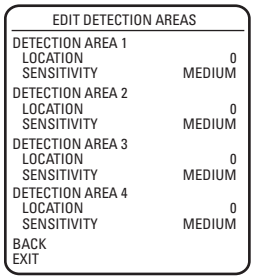
Edit Detection Areas

Four motion detection areas can be defined for a preset. Use the following steps to edit motion detection areas.

1. Edit detection areas 1, 2, 3, or 4:

    a. Use the joystick to position the cursor beside EDIT DETECTION AREAS.

    b. Press Iris Open. The EDIT DETECTION AREAS configuration window appears.



    c. Use the joystick to position the cursor beside LOCATION for DETECTION AREA 1, 2, 3, or 4.

    d. Press Iris Open. The cursor moves to the right next to the number 0.

    e. Move the joystick *up*. A blue rectangle appears in the upper-left corner of the screen (refer to Figure 4 on page 38).

    f. Use the joystick to place the blue rectangle over the desired detection area.

    g. Press Iris Open to make a selection.

*This setting applies only to Pressurized Spectra IV dome systems.

Figure 4. Motion Detection Areas

2. Set the sensitivity of the motion detection area:
   a. Position the cursor next to SENSITIVITY for DETECTION AREA 1, 2, 3, or 4.
   b. Press Iris Open, the cursor moves to the right.
   c. Use the joystick to select one of the following sensitivity levels:

      HIGH: The sensitivity level is high.

      MEDIUM (default): Average sensitivity.

      LOW: The sensitivity level is low.

   d. Press Iris Open to make selection.

      Note: Motion detection is not guaranteed to catch 100 percent of activity.

Activate Aux Command

Motion detection can be configured to trigger an auxiliary command when motion is detected. The following are the settings for ACTIVATE AUX:

OFF (default): Motion detection will not trigger an AUX command.

1: Triggers a command to AUX 1.

2: Triggers a command to AUX 2.

Aux Time

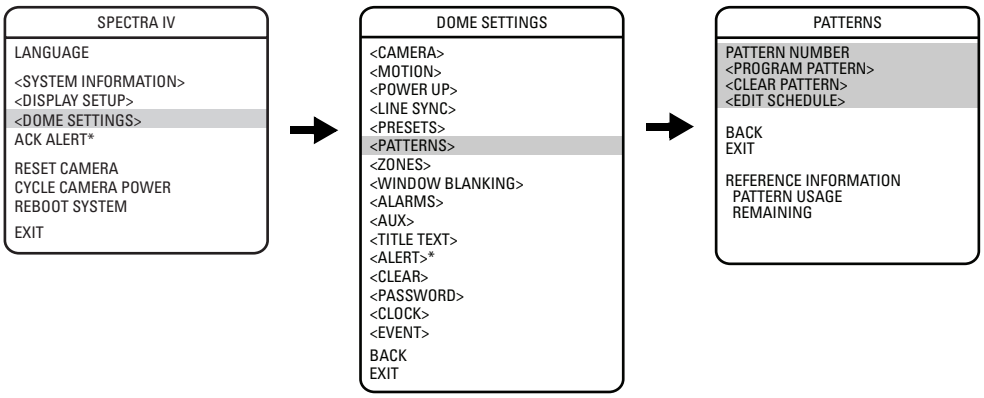
Aux time is the length of time the auxiliary will remain on after motion is detected. Available settings for AUX TIME are 1 to 60 seconds.

EDIT SCHEDULE

The Edit Schedule menu is a duplicate of the Edit Event menu (refer to *Event* on page 54) with the following exceptions. In the Edit Schedule menu, the event type cannot be changed. Also, the Holiday feature cannot be accessed from the Edit Schedule menu.

For instructions on changing the features in the Edit Schedule menu, refer to *Edit Event* on page 55.

PATTERNS



A pattern is a memorized, repeating series of pan, tilt, zoom, and preset functions that can be recalled with a command from a controller or automatically by a configured function (alarm, park, event, or power-up).

The 23X models have one user-defined pattern available. The 27X and 35X models can handle up to eight patterns. Pattern length is based upon memory usage rather than a fixed amount of time. The complexity of a pattern will determine the amount of storage available to configure other patterns.

Note: In most cases, the memory available will allow for ample time to schedule typical patterns. If the scheduled patterns are unusually lengthy or complex, there is a possibility that there may not be enough remaining memory to configure all eight patterns for the 27X and 35X models.

To configure a pattern:

1. Use the joystick to position the cursor beside PATTERN NUMBER. Press Iris Open. The cursor moves to the right.
2. Move the joystick up or down to view selections. Press Iris Open to enter selection.
3. Use the joystick to position the cursor beside PROGRAM PATTERN.
4. Press Iris Open. The Patterns configuration window appears.
5. Follow the directions displayed on the monitor.

After a pattern is configured, the remaining storage percentage is displayed on the screen. This is the amount of memory available to configure the remaining patterns.

To clear a pattern:

1. Use the joystick to position the cursor beside CLEAR PATTERN.
2. Press Iris Open.
3. Follow the directions displayed on the monitor.

To edit the pattern schedule:

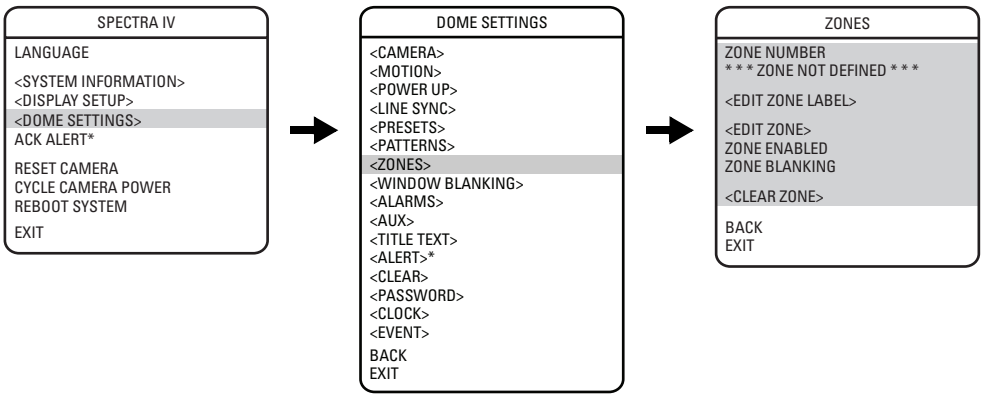
The Edit Schedule menu is a duplicate of the Edit Event menu (refer to *Event* on page 54) with the following exceptions. In the Edit Schedule menu, the event type cannot be changed. Also, the Holiday feature cannot be accessed from the Edit Schedule menu.

For instructions on changing the features in the Edit Schedule menu, refer to *Edit Event* on page 55.

Note: When configuring one or more presets within a pattern, use the normal controller commands to call a preset. Not all controllers can start all patterns. However, any of the patterns can be automatically started with park, power-up, event, and alarm functions.

*This setting applies only to Pressurized Spectra IV dome systems.

ZONES



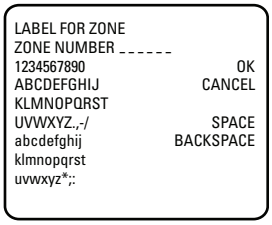
A zone is a pan area, defined by a left and right limit, on the 360-degree pan plane. Spectra IV dome systems are capable of eight zones, each with a 20-character label.

To configure a zone:

1. Use the joystick to position the cursor beside ZONE NUMBER. Press Iris Open, and the cursor moves to the right.
2. Move the joystick up or down to view selections. Press Iris Open to enter selection.
3. Use the joystick to position the cursor beside EDIT ZONE.
4. Press Iris Open. The Zone configuration window appears.
5. Follow the directions displayed on the monitor. After the left and right limit stops are set, the Zones menu reappears with the ZONE ENABLED option set to YES.

To edit a zone label:

1. Use the joystick to position the cursor beside EDIT ZONE LABEL.
2. Press Iris Open. The following information appears:



3. Use the joystick to position the cursor beside a character. Press Iris Open to enter selection. To clear a character, position the cursor beside BACKSPACE, and then press Iris Open.
4. When the label is completed, move the cursor to OK. Press Iris Open to return to the Zones menu.

To disable a zone (a zone is enabled automatically when it is configured) or to blank a zone:

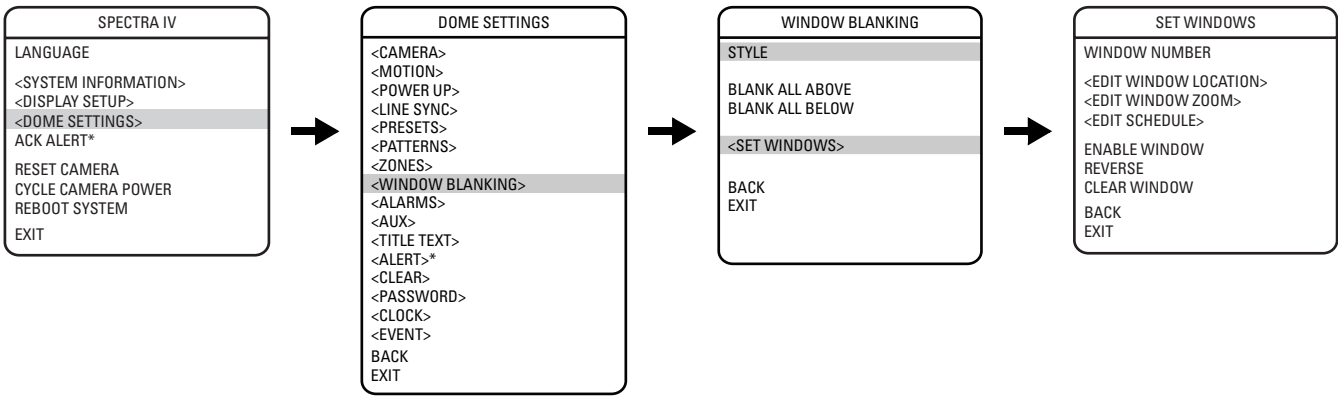
1. Move the cursor beside ZONE ENABLED or ZONE BLANKING.
2. Press Iris Open. The cursor moves to the right.
3. Move the joystick up or down to view selections. Press Iris Open to enter selection.

To clear a zone:

1. Use the joystick to position the cursor beside CLEAR ZONE.
2. Press Iris Open. Follow the instructions on the screen.

*This setting applies only to Pressurized Spectra IV dome systems.

WINDOW BLANKING



Window blanking allows a user to configure the four-sided areas that cannot be viewed by the operator of the dome system. A blanked area will move with pan and tilt functions and automatically adjust in size as the lens zooms telephoto and wide.

The 23X models have four user-defined windows blank available. The 27X and 35X models have eight available user-defined window blanks.

Spectra IV dome systems have two styles of window blanking: Gray and Smear. If the style is set to Gray, the blanked area is covered with a solid gray window. If Smear is selected images behind the window will be noticeable but not distinguishable.

To set a window blanking area:

1. Use the joystick to position the cursor beside WINDOW BLANKING. Press Iris Open. The WINDOW BLANKING menu appears on the screen.
2. Move the joystick to position the cursor beside SET WINDOWS. Press Iris Open to enter.
3. Position the cursor beside WINDOW NUMBER. Press Iris Open. The cursor moves to the right.
4. Move the joystick up or down to view selections. Press Iris Open to enter selection.
5. Use the joystick to position the cursor beside EDIT WINDOW LOCATION. Press Iris Open, and then follow the instructions that appear on the screen. When all four corners are set, the SET WINDOWS menu reappears, the blanked area is displayed, and the ENABLE WINDOW option is set to YES.

Notes:

- Use the inside corner of the window selection tool as a guide when selecting the upper left, upper right, bottom right, and bottom left corners of the window.

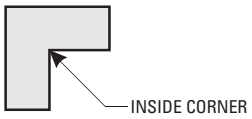


Figure 5. Window Selection Tool

- Set windows are not visible when editing a new window location.

Disabled **Enabled**

Figure 6. Window Blanking

6. The blanked area can be configured to turn on or off at a specified zoom point. To set the zoom point:
   a. Use the joystick to position the cursor beside EDIT WINDOW ZOOM, and then press Iris Open.
   b. Zoom in to the point where you want window blanking to turn on. Press Iris Open to set the zoom point.

   Notes:

   - Since the area is already blanked out, it may be difficult to determine when you want window blanking to turn on. Reverse the window before setting the zoom point. When finished reverse the window again to blank out the area.
   - Increase the size of the window if any part of the blanked area is revealed during PTZ operations.

EDIT SCHEDULE

The Edit Schedule menu is a duplicate of the Edit Event menu (refer to *Event* on page 54) with the following exceptions. In the Edit Schedule menu, the event type cannot be changed. Also, the Holiday feature cannot be accessed from the Edit Schedule menu.

For instructions on changing the features in the Edit Schedule menu, refer to *Edit Event* on page 55.

REVERSE

A blanked out area can be reversed to make it visible and the areas on both sides of it not visible. The areas above and below the blanking area remain visible. Reversing the window a second time will return it to its original condition.

CLEAR WINDOW

All areas that have been set for window blanking are cleared.

BLANK ALL ABOVE/BLANK ALL BELOW

The Blank All Above and Blank All Below options add additional flexibility to setting up privacy areas. These settings are ideal for applications where a complete pan location needs to be blanked.

Table E. Window Blank Settings

Blank All Above		Blank All Below	
Tilt Angle	**Blanked Area**	**Tilt Angle**	**Blanked Area**
OFF	No blanking	OFF	No blanking
15	15° above horizon to 18° above horizon	—	—
10	10° above horizon to 18° above horizon	—	—
0	Horizon to 18° above horizon	0	Horizon to 92° below horizon
-10	18° above horizon to 10° below horizon	-10	10° to 92° below horizon
-20	18° above horizon to 20° below horizon	-20	20° to 92° below horizon
-30	18° above horizon to 30° below horizon	-30	30° to 92° below horizon
-40	18° above horizon to 40° below horizon	-40	40° to 92° below horizon
-50	18° above horizon to 50° below horizon	-50	50° to 92° below horizon
-60	18° above horizon to 60° below horizon	-60	60° to 92° below horizon
-70	18° above horizon to 70° below horizon	-70	70° to 92° below horizon
-80	18° above horizon to 80° below horizon	-80	80° to 92° below horizon

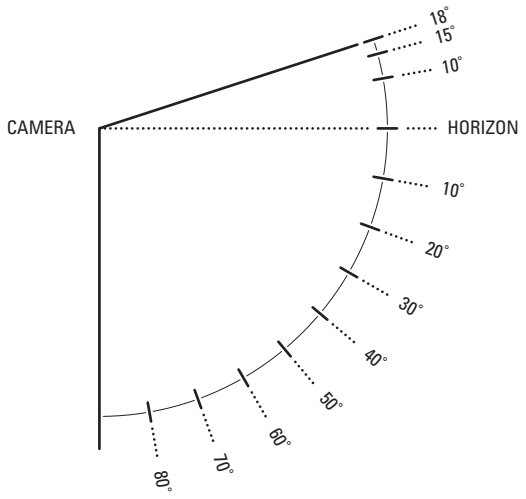
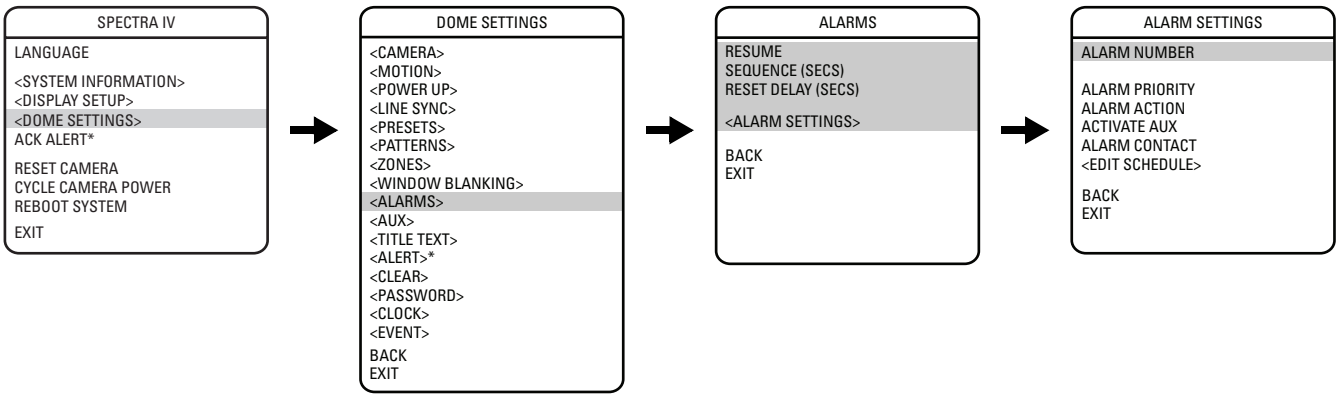


Figure 7. Window Blank Tilt Angles

ALARMS



The 23X models have one alarm input available. The 27X and 35X models have seven alarm inputs. Alarm inputs can be configured as high, medium, or low priority. When an alarm is received, an input signal to the dome triggers the user-defined action (go to preset, run pattern, etc.) configured for the alarm.

Note: Refer to the notation in step 6 for the limited alarm features available for 23X models.

There are three global alarm settings:

RESUME: This mode lets the dome resume its previous activity (scan, pattern, or previous position) after all alarms are cleared.

SEQUENCE: This is the time the dome will perform an alarm activity when more than one alarm of the same priority occurs at the same time.

RESET DELAY: This is the amount of time the dome considers the alarm to be active after it has physically cleared.

Use the following steps to configure the alarm settings.

1. Use the joystick to position the cursor beside ALARM SETTINGS. Press Iris Open.
2. Select the alarm number:
   a. Use the joystick to position the cursor beside ALARM NUMBER.
   b. Press Iris Open. The cursor moves to the right.
   c. Move the joystick up or down to view selections. Press Iris Open to enter selection.
3. Select the alarm priority:
   a. Use the joystick to position the cursor beside ALARM PRIORITY.
   b. Press Iris Open. The cursor moves to the right.
   c. Move the joystick up or down to view the available selections. Available settings include HIGH, MEDIUM, and LOW (default). If multiple alarms with different priorities are active at the same time, the dome will only go to the alarms with the highest priority.
   d. Press Iris Open to enter selection.

      HIGH: Alarm action takes highest priority and will override manual PTZ control.

      MEDIUM/LOW: Alarm action will not occur if an alarm occurs during manual pan, tilt, and zoom control.

*This setting applies only to Pressurized Spectra IV dome systems.

4. Set the alarm action:
   a. Use the joystick to position the cursor beside ALARM ACTION.
   b. Press Iris Open. The cursor moves to the right.
   c. Move the joystick up or down to view the available selections. The following are the settings for alarm action:

      NONE: No action when alarm is triggered.

      PRESET: Dome goes to the preset that is the same as the alarm number. Preset 1 will go to Alarm 1.

      PATTERN 1: Dome runs pattern 1 when alarm is triggered.

      PATTERN 2: Dome runs pattern 2 when alarm is triggered.

      PATTERN 3: Dome runs pattern 3 when alarm is triggered.

      PATTERN 4: Dome runs pattern 4 when alarm is triggered.

      PATTERN 5: Dome runs pattern 5 when alarm is triggered.

      PATTERN 6: Dome runs pattern 6 when alarm is triggered.

      PATTERN 7: Dome runs pattern 7 when alarm is triggered.

      PATTERN 8: Dome runs pattern 8 when alarm is triggered.

      AUTO SCAN: Dome starts auto scan operation when alarm is triggered.

      RANDOM SCAN: Dome starts random scan operation when alarm is triggered.

      FRAME SCAN: Dome starts frame scan operation when alarm is triggered.
   d. Press Iris Open to enter selection.

5. Set the auxiliary to activate:
   a. Use the joystick to position the cursor beside ACTIVATE AUX.
   b. Press Iris Open. The cursor moves to the right.
   c. Move the joystick up or down to view the following available selections.

      NO (default): Not activated.

      1: An alarm action will close AUX 1.

      2: An alarm action will close AUX 2.
   d. Press Iris Open to enter selection.

   Note: The AUX 1/AUX2 will stop when all the alarms assigned to it have cleared. If the AUX1/AUX is set up as momentary, then it will be activated each time a new alarm is activated.

6. Set the alarm contact:
   a. Use the joystick to position the cursor beside ALARM CONTACT.
   b. Press Iris Open. The cursor moves to the right.
   c. Move the joystick up or down to view the following available selections.

      N/O (default): Normally open.

      N/C: Normally closed.

   d. Press Iris Open to enter selection.

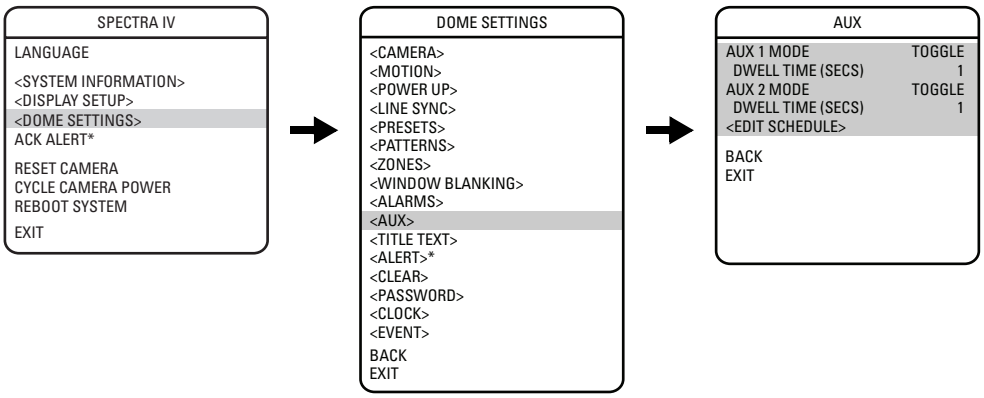
      Note: The alarm contact feature is functional and available for 23X models only if the dome drive is installed in a Spectra III SE or Spectra IV SE back box.

7. To edit the alarm schedule:

   The Edit Schedule menu is a duplicate of the Edit Event menu (refer to *Event* on page 54) with the following exceptions. In the Edit Schedule menu, the event type cannot be changed. Also, the Holiday feature cannot be accessed from the Edit Schedule menu.

   For instructions on changing the features in the Edit Schedule menu, refer to *Edit Event* on page 55.

AUX



An auxiliary output is a configurable signal from the dome back box that can trigger another device to operate. An auxiliary output can be configured to trigger from an alarm or from a controller.

An AUX 1 command from the controller will activate the relay in the dome and operate the device that is connected to the relay. The output of AUX 1 can be connected to the alarm input of a system switch to activate automatic monitor switching and recording.

An AUX 2 command from the controller will place a ground at the output of AUX 2 to operate the device that is connected to it.

The following are the available AUX mode settings:

TOGGLE (default): Changes the state of the auxiliary output every time an AUX command is received from the controller.

LATCHING: Must receive an AUX ON/AUX OFF command from the controller to turn the auxiliary output on/off.

MOMENTARY: An AUX ON command from the controller turns the auxiliary output on for the configured DWELL TIME. The auxiliary output will automatically turn off when the dwell time is finished.

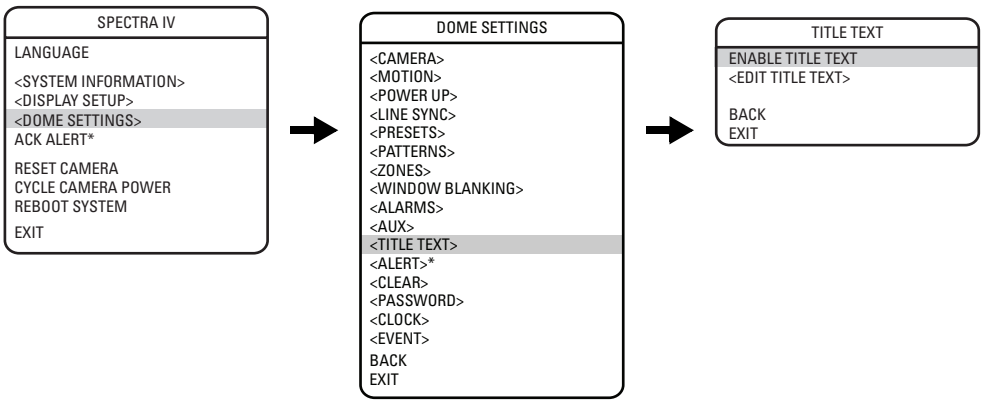
EDIT SCHEDULE

The Edit Schedule menu is a duplicate of the Edit Event menu (refer to *Event* on page 54) with the following exceptions. In the Edit Schedule menu, the event type cannot be changed. Also, the Holiday feature cannot be accessed from the Edit Schedule menu.

For instructions on changing the features in the Edit Schedule menu, refer to *Edit Event* on page 55.

*This setting applies only to Pressurized Spectra IV dome systems.

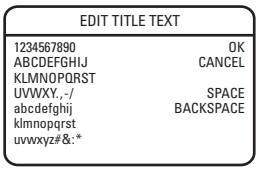
TITLE TEXT



Title text is the label used to identify the camera viewed on the monitor. Up to 20 characters can be used for a title.

To edit the title text label, do the following:

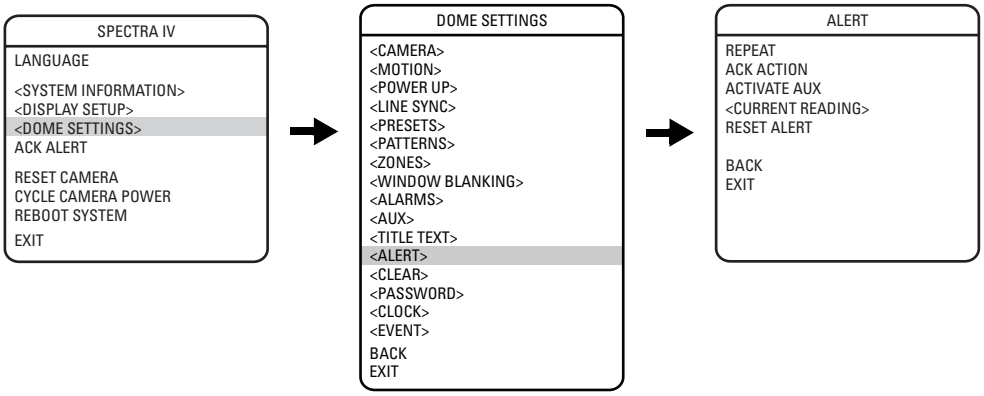
1. Use the joystick to position the cursor beside EDIT TITLE TEXT.
2. Press Iris Open. The following information appears:



3. Use the joystick to position the cursor beside a character. Press Iris Open to select the character. To clear a character, position the cursor beside BACKSPACE, and then press Iris Open.
4. When the title is completed, move the cursor to OK. Press Iris Open to return to the Title Text menu.
5. Enable the title text label by doing the following:
   a. Move the cursor beside ENABLE TITLE TEXT.
   b. Press Iris Open. The cursor moves to the right.
   c. Move the joystick up or down to view the selections. Select ON and then press Iris Open to enable the title text.

*This setting applies only to Pressurized Spectra IV dome systems.

ALERT



Note: The Alert option applies only to Pressurized Spectra IV dome systems. Spectra IV systems that are not pressurized will not display this menu item.

Sensors strategically placed inside the pressurized dome system continually monitor pressure, temperature, and dew point. If internal conditions reach unacceptable levels, an alert message appears on the screen describing the alert condition. For example, if pressure drops below 1 psig, LOW PRESSURE is displayed.

The following system conditions will trigger an alert message:

System Condition	Alert Message
Temperature is above 140°F (60°C)	HIGH TEMPERATURE
Temperature is below -40°F (-40°C)	LOW TEMPERATURE
Pressure is above 13 PSIG	HIGH PRESSURE
Pressure is below 1 PSIG	LOW PRESSURE
The difference between the temperature and the dew point is less than or equal to 3°C.	DEW POINT (HIGH HUMIDITY)

The alert message will be repeatedly displayed until the system controller acknowledges the alert condition by selecting ACK ALERT in the main menu. Once acknowledged, the alert message changes to the configured acknowledge action (ACK ACTION). If the alert condition remains active after a period of time, the alert message reappears on the monitor, restarting the alert message cycle. This cycle will continue to repeat until the alert condition is resolved.

REPEAT

This setting programs how often an alert message is repeatedly displayed until the system controller acknowledges the alert condition. The following are the settings:

CONSTANT: The alert message is continuously displayed until acknowledged.

15 MIN: The alert message is displayed every 15 minutes for a 15-second duration until acknowledged.

30 MIN: The alert message is displayed every 30 minutes for a 15-second duration until acknowledged.

60 MIN: The alert message is displayed every 60 minutes for a 15-second duration until acknowledged.

OFF: The alert message is disabled and will not be displayed.

ACK ACTION

Set ACK ACTION to configure the frequency at which an alert message is displayed after the alert condition has been acknowledged. The following settings are available:

ALWAYS ON: The alert message is displayed until alert conditions are cleared.

OFF 8 HRS: The alert message is turned off for 8 hours. Message returns after 8 hours if the alert condition persists.

OFF 24 HRS: The alert message is turned off for 24 hours. Message returns after 24 hours if the alert condition persists.

OFF 48 HRS: The alert message is turned off for 48 hours. Message returns after 48 hours if the alert condition persists.

ACTIVATE AUX

This setting activates an auxiliary when an alert condition exists. Settings include the following options:

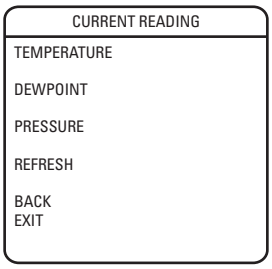
NONE (default): Not activated.

1: An alert condition will close AUX 1.

2: An alert condition will close AUX 2.

CURRENT READING

The Current Reading menu displays the existing status of temperature, pressure, and dew point inside the dome system. An arrow displayed to the left of a menu item denotes that an alert condition exists.



An up arrow indicates the reading is over the threshold. A down arrow indicates the reading is below the threshold.

The high temperature alert occurs if the temperature is above 140°F (60°C).

The low temperature alert occurs if the temperature is below -40°F (-40°C).

The high pressure alert occurs if the pressure is above 13 PSIG.

The low pressure alert occurs if the pressure is below 1 PSIG.

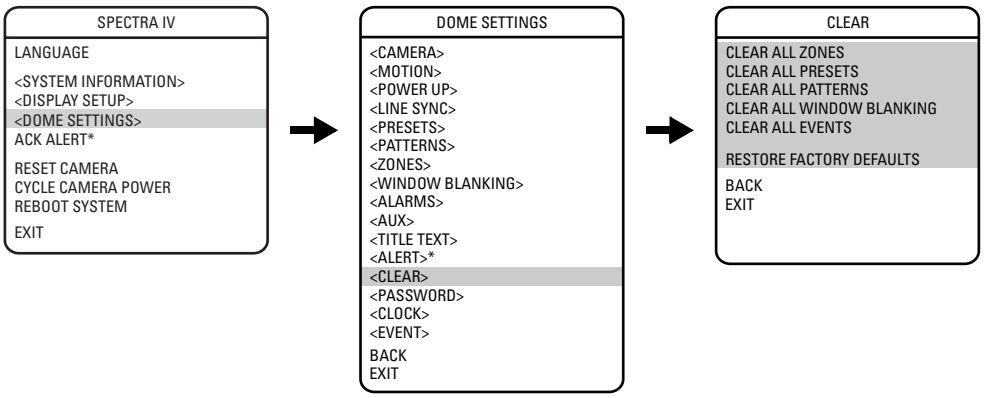
The dew point (high humidity) alert occurs if the difference between the temperature and the dew point is less than or equal to 3°C.

Note: The normal operating temperature inside the unit will be greater than the temperature outside the back box due to the heat emitted by the system's electronics.

RESET ALERT

Reset alert clears the alert condition and removes the alert label from the monitor. The system automatically checks internal conditions 60 seconds after reset. If conditions are still unacceptable, the alert label reappears on the screen indicating further corrective action is required.

CLEAR



Use this setting to clear user-defined settings or return the dome to factory default settings.

The following are the available settings:

ALL ZONES: Clears all zones. To clear a single zone, refer to *Zones* on page 40.

ALL PRESETS: Clears all presets. To clear a single preset, refer to *Presets* on page 34.

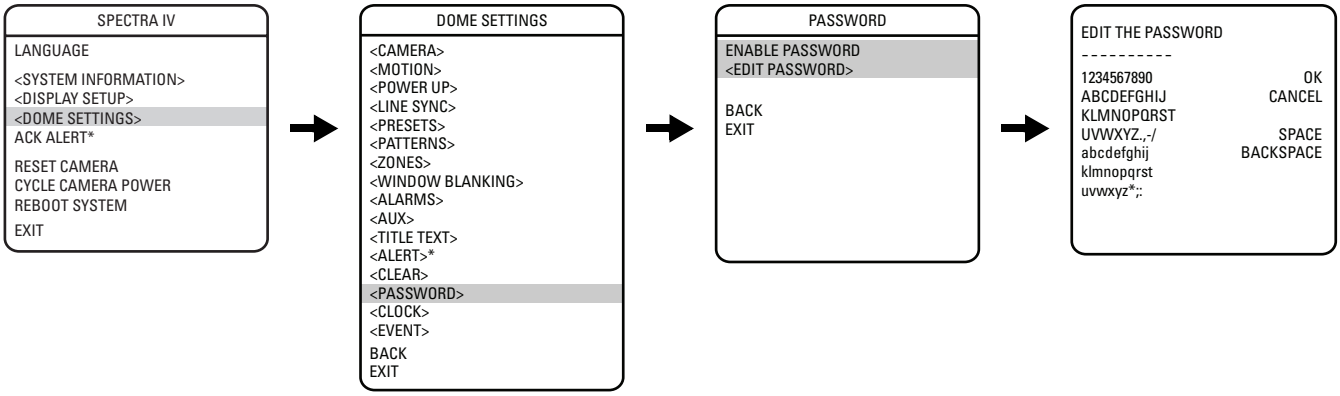
ALL PATTERNS: Clears all patterns. To clear a single pattern, refer to *Patterns* on page 39.

ALL WINDOW BLANKING: Clears all blanked windows. To clear a single blanked window, refer to *Window Blanking* on page 41.

CLEAR ALL EVENTS: Clears all events. To clear a single event, refer to *Event* on page 54.

RESTORE FACTORY DEFAULTS: Restores all camera settings to factory default settings.

PASSWORD



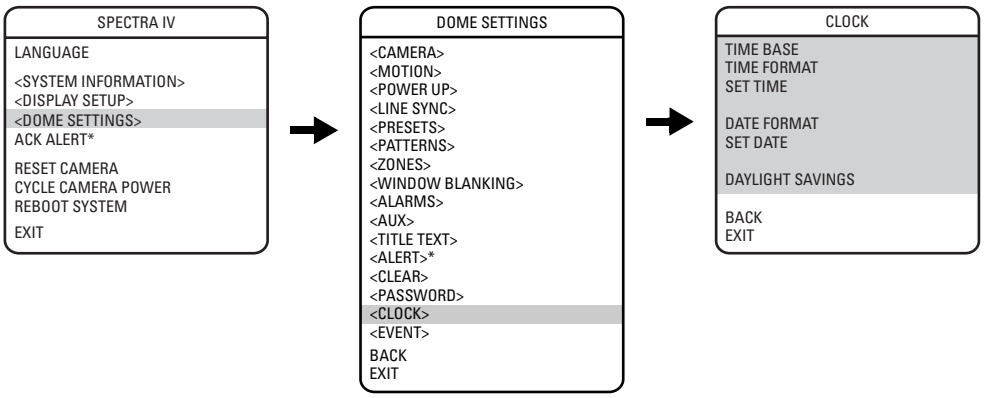
Spectra IV dome systems feature password protection to prevent unauthorized changes to the dome settings. An operator can open the System Information and Display Setup menus, but cannot access any of the dome settings menus.

Controller/keyboard commands cannot override password-protected settings. If a keyboard is used to set a preset, pattern, or zone, the Enter Password menu appears. The password must be entered before you can continue configuring the system.

At least one character must be entered to create a valid password.

*This setting applies only to Pressurized Spectra IV dome systems.

CLOCK



The clock is used to set the current date and time. The date and time set in the Clock menu is used to configure events. The date and time can also be displayed on the monitor when the menus are not being accessed.

To set the clock, do the following:

1. Use the joystick to position the cursor beside TIME BASE. Press Iris Open. The following are the settings for time base:

   POWER LINE: This is the most accurate time base and is the preferred selection in areas with a stable power line frequency.

   INTERNAL CLOCK: The internal clock should be used in areas where the power line frequency is not accurate.

   a. Move the joystick up or down to view the selections.

   b. Press Iris Open to select INTERNAL CLOCK or POWER LINE.

2. Use the joystick to position the cursor beside TIME FORMAT. Press Iris Open. Move the joystick up or down to view the selections. Select 12 HOUR or 24 HOUR, and then press Iris Open to confirm the time format.

3. Use the joystick to position the cursor beside SET TIME. Press Iris Open. Scroll through the hours until the desired time appears. Use the joystick to move the cursor to the right. Scroll through the minutes until the desired time appears. Press Iris Open to select the time.

4. Use the joystick to position the cursor beside DATE FORMAT. Press Iris Open. Move the joystick up or down to select MM/DD/YYYY or DD/MM/YYYY. Press Iris Open to confirm the date format.

5. Use the joystick to position the cursor beside SET DATE. Press Iris Open. Scroll through the days, months, and years until the desired number appears. Press Iris Open to select the date.

6. Use the joystick to position the cursor beside DAYLIGHT SAVINGS. Press Iris Open. The following are the settings for daylight savings:

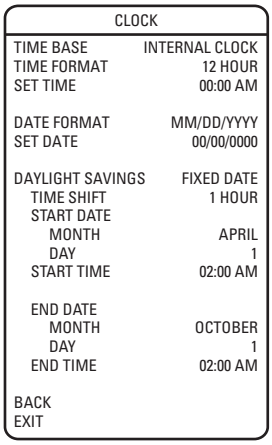
   OFF: Daylight saving time will be turned off.

   FIXED DATE: Daylight saving time occurs on the same date each year.

   RELATIVE DATE: Daylight saving time occurs on a different date each year, such as the first Sunday in April.

*This setting applies only to Pressurized Spectra IV dome systems.

7. If FIXED DATE was selected, the following information appears:



   a. Use the joystick to position the cursor beside TIME SHIFT. Press Iris Open. Scroll through the options until the desired selection appears. Press Iris Open to select the time shift.

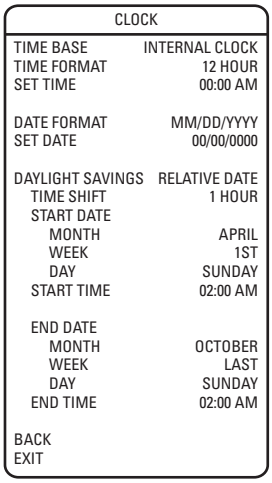
   b. Use the joystick to position the cursor beside the start date MONTH. Press Iris Open. Scroll through the options until the desired month appears. Press Iris Open to select the month.

   c. Use the joystick to position the cursor beside the start date DAY. Press Iris Open. Scroll through the options until the desired date appears. Press Iris Open to select the day.

   d. Use the joystick to position the cursor beside START TIME. Press Iris Open. Scroll through the hours until the desired time appears. Use the joystick to move the cursor to the right. Scroll through the minutes until the desired time appears. Press Iris Open to select the start time.

   e. Repeat steps b through d for the ending date and time.

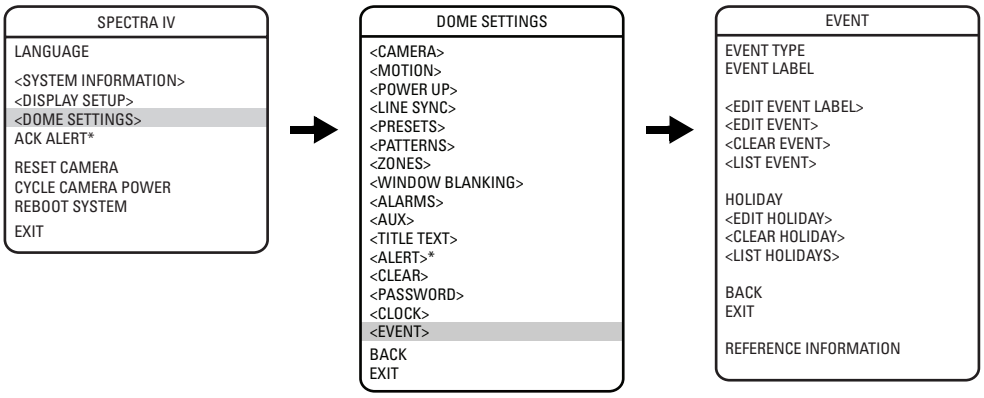
8. If RELATIVE DATE was selected, the following information appears:



   Follow the instructions in step 7 for FIXED DATE, adding WEEK.

EVENT

(Applies only to 27X and 35X models.)



An event is a preconfigured camera, park, scan, preset, pattern, window blanking, alarm, or auxiliary function that can be performed automatically at a specific date and time.

For example, suppose a camera is set to run in a continuous pattern that scans a parking lot during business hours Monday through Friday. On Saturday and Sunday the camera needs to stop running the pattern and observe a gate. First, configure a preset to set the camera to observe the gate. Second, schedule an event to activate the preset on the weekends. Finally, a second, separate event must be scheduled to end the first event and allow the camera to return to the pattern on Monday.

Note: Events do not have a selectable duration. A second event must be scheduled to end a previous event.

Events can be configured from the Preset, Pattern, Window Blanking, Alarm, or Aux menus, or they can be configured from the Event menu. Events are managed individually or as a group from the Event menu.

EVENT TYPE

Any of the available event types can be selected from this menu, or you may select ALL EVENTS to manage the events as a group.The following are the settings for event type:

SCAN: A scan event executes a specified scan (random, auto, or frame scan) using the limit stops and scan speed defined in the Motion menu. Refer to *Motion Settings* on page 29.

PARK: A park event executes the user-defined park action as specified in the Motion menu. Refer to *Park Action* on page 30.

WINDOW BLANKING: A window blanking event activates or deactivates a previously defined window blank. The window blank remains activated or deactivated until another configured event changes the state of the window or you modify it through the Window Blanking menu. Refer to *Window Blanking* on page 41.

AUX: An auxiliary event turns on/off an auxiliary output when the event triggers. Refer to *Aux* on page 47.

ALARM: An alarm event executes the action associated with the specified alarm number. Refer to *Alarms* on page 44.

PATTERN: A pattern event starts a previously defined pattern when the event is triggered. Refer to *Patterns* on page 39.

CAMERA: A camera event assigns the camera settings of a preset to the current camera settings located in the Camera menu. Refer to *Camera* on page 22. The preset that is referenced by the event must be defined prior to setting up a camera event.

For the camera event to function, the referenced preset must have Custom Camera Settings activated. Refer to *Presets* on page 34.

Note: If you have camera settings defined in the Camera menu that you wish to restore following a camera event which overwrites those settings, you must save the original settings as a separate preset prior to the camera event being triggered. You can then set a second camera event to call the preset that has the original settings saved. Camera settings can also be changed manually from the Camera menu following the original camera event.

PRESET: A preset event executes a previously defined preset when the event is triggered. Refer to *Presets* on page 34.

Note: The event type cannot be changed if you are accessing it through the Edit Schedule option from the Preset, Pattern, Window Blanking, Alarm, or Aux menu.

*This setting applies only to Pressurized Spectra IV dome systems.

EVENT LABEL

Set the event label to NEW to create a new event.

Use the following steps to manage an existing event.

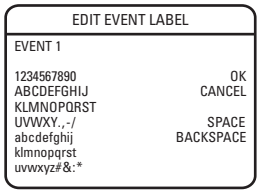
1. Use the joystick to position the cursor beside EVENT LABEL. Press Iris Open.
2. Move the joystick up or down to scroll through the events. Press Iris Open to enter selection.

   As you scroll through the events, the reference information at the bottom of the screen displays the corresponding details for each event. To view a list of all events and their details, refer to *List Event* on page 56.

EDIT EVENT LABEL

After an event is configured, the label can be changed using the following steps:

1. Use the joystick to position the cursor beside EDIT EVENT LABEL.
2. Press Iris Open. The following information appears:



3. Use the joystick to position the cursor beside a character. Press Iris Open to enter the selection. To clear a character, position the cursor beside BACKSPACE, and then press Iris Open.
4. When the label is completed, move the cursor to OK. Press Iris Open to return to the Edit Schedule menu.

After an event is labeled, the label will be displayed when the event is activated according to the display setup values for this label. Refer to *Display Setup* on page 20 for instructions on how to change the way a label is displayed on the monitor.

EDIT EVENT

Use the following steps to edit an event.

1. Use the joystick to position the cursor beside EDIT EVENT.
2. Press Iris Open. The following information appears:

   a. Use the joystick to position the cursor beside EVENT ACTIVE. Press Iris Open. Scroll to select NO to leave the event inactive or YES to activate the event. Press Iris Open to confirm your selection.

   b. Use the joystick to position the cursor beside EVENT TIME. Press Iris Open. Scroll through the hours until the desired time appears. Use the joystick to move the cursor to the right. Scroll through the minutes until the desired time appears. Press Iris Open to select the time.

   c. Use the joystick to position the cursor beside SUNDAY. Press Iris Open. The available options are OFF and ON. Press Iris Open to confirm your selection.

d. Follow the instructions in the previous step for the remaining days of the week.

e. Use the joystick to position the cursor beside HOLIDAY. Press Iris Open. The following are the holiday settings:

SKIP HOLIDAYS: The event will not occur on a day of the week for which it is set if that date is in the list of holidays.

ON: The event will activate on holidays that are set in the Event menu, in addition to its normally scheduled days of the week.

OFF: The event only occurs on the days of the week that it is scheduled; holidays have no effect on the event.

CLEAR EVENT

To clear an event:

1. Use the joystick to position the cursor beside CLEAR EVENT.
2. Press Iris Open.
3. Follow the directions displayed on the monitor.

LIST EVENT

To list events:

1. Use the joystick to position the cursor beside LIST EVENT.
2. Press Iris Open.
3. All configured events will be listed.

HOLIDAY

Use the following steps to create a new holiday.

1. Use the joystick to position the cursor beside HOLIDAY. Press Iris Open.
2. Move the joystick up or down to scroll through the options. If no holidays were created in the past, NEW is the only selectable option. Press Iris Open to select NEW.
3. Proceed to *Edit Holiday* on page 56.

Use the following steps to manage an existing holiday.

1. Use the joystick to position the cursor beside HOLIDAY. Press Iris Open.
2. Move the joystick up or down to scroll through the holidays. Press Iris Open to enter a selection.
3. Proceed to *Edit Holiday* on page 56.

Note: Holidays cannot be changed through the Edit Schedule option from the Preset, Pattern, Window Blanking, Alarm, or Aux menus.

EDIT HOLIDAY

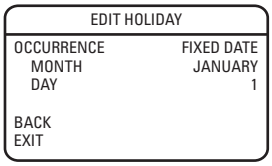
Use the following steps to edit a holiday:

1. Use the joystick to position the cursor beside EDIT EVENT LABEL.
2. Press Iris Open.
3. Use the joystick to position the cursor beside OCCURRENCE. Press Iris Open. The following are the settings for Occurrence:

FIXED DATE: The holiday occurs on the same date each year.

RELATIVE DATE: The holiday occurs on a different date each year, such as the third Sunday in April.

4. If FIXED DATE was selected as the occurrence, the following information appears:



   a. Use the joystick to position the cursor beside MONTH. Press Iris Open. Scroll through the options until the desired month appears. Press Iris Open to select the month.

   b. Use the joystick to position the cursor beside DAY. Press Iris Open. Scroll through the options until the desired date appears. Press Iris Open to select the day.

5. If RELATIVE DATE was selected as the occurrence:

   a. Use the joystick to position the cursor beside MONTH. Press Iris Open. Scroll through the options until the desired month appears. Press Iris Open to select the month.

   b. Use the joystick to position the cursor beside WEEK. Press Iris Open. Scroll through the options until the desired week appears. Press Iris Open to select the week.

   c. Use the joystick to position the cursor beside DAY. Press Iris Open. Scroll through the options until the desired day of the week appears. Press Iris Open to select the day.

CLEAR HOLIDAY

To clear a holiday:

1. Use the joystick to position the cursor beside CLEAR HOLIDAY.
2. Press Iris Open.
3. Follow the directions displayed on the monitor.

LIST HOLIDAYS

To list events:

1. Use the joystick to position the cursor beside LIST HOLIDAYS.
2. Press Iris Open.
3. All configured holidays will be listed.

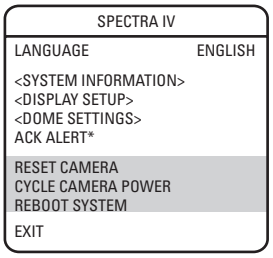
SCHEDULED EVENTS

Use this page to record scheduled events.

EVENT NUMBER	EVENT TYPE	LABEL	TIME	OCCURS	HOLIDAY
Example: 1	Preset	Weekend	11:00 AM	Sat–Sun	Skips Holidays

Description: Camera focuses on gate on weekends when the office is closed.

Reset, Cycle Power, Reboot



RESET CAMERA

Use this function to reset all camera settings to factory default parameters.

CYCLE CAMERA POWER

If the camera is not operating or if you lose camera control, cycle camera power. Cycling camera power resets the camera but does not change any saved camera settings.

REBOOT SYSTEM

Reboot the system if it is not operating or if there is no control. Rebooting the system will cycle dome and camera power without changing the configured dome settings.

Software/Language File Upload

The RJ-45 data port of the dome drive allows access for on-site setup, testing, and uploading of revised operating software and language files. A Pelco field service tool is required to perform these operations. Field service tools include Pelco's remote monitor kit (IPS-RMK), remote data port box (IPS-RDPE-2), and remote monitor cable (IPS-CABLE).

For instructions on how to upload revised operating software and language files refer to the Installation/Operation manual supplied with the field service tool.

Note: Only perform software uploads when necessary. Software uploads do not need to be performed if the dome system is operating properly.

During a software/language file upload, a progress bar will appear indicating that data is being transferred to the Spectra dome system. The default setting for data transmission is 115.2 KB per second. Noisy and long-run connections will slow the transmission rate.

Maintenance

The Spectra IV dome systems do not require any special maintenance.

Occasionally, dust may build up on the inside or the outside of the dome. If this occurs, turn power off to the unit and remove the lower dome from the back box. Remove the dust from the lower dome using compressed air from a spray can. Replace the lower dome following the installation instructions that were shipped with it.

⚠ **Warning:** Proper eye protection should be worn when using compressed air cans.

Specifications

23X MODELS

DD423

Signal Format	NTSC
Scanning System	2:1 Interlace
Image Sensor	1/4-inch progressive scan CCD
Effective Pixels	768 (H) X 494 (V)
Horizontal Resolution	540 TV lines
Lens	f/1.6 (focal length, 3.6~82.8 mm; 23X optical zoom, 12X digital zoom)
Zoom Speed (optical range)	2.9/4.2/5.8 seconds
Horizontal Angle of View	54° at 3.6 mm wide zoom; 2.5° at 82.8 mm telephoto zoom
Focus	Automatic with manual override
Maximum Sensitivity at 35 IRE	0.025 lux at 1/2 sec. shutter speed (color) 0.1 lux at 1/60 sec. shutter speed (B-W) 0.004 lux at 1/2 sec. shutter speed (B-W)
Sync System	Internal/AC line lock, phase adjustable using remote control, V-Sync
White Balance	Automatic with manual override
Shutter Speed	Automatic (electronic iris)/manual; 1/2~1/30,000
Iris Control	Automatic iris control with manual override
Gain Control	Automatic/off
Video Output	1 Vp-p, 75 ohms
Video Signal-to-Noise	>50 dB
Wide Dynamic Range	80X

DD423-X

Signal Format	PAL
Scanning System	2:1 Interlace
Image Sensor	1/4-inch progressive scan CCD
Effective Pixels	752 (H) X 582 (V)
Horizontal Resolution	540 TV lines
Lens	f/1.6 (focal length, 3.6~82.8 mm; 23X optical zoom, 12X digital zoom)
Zoom Speed	2.9/4.2/5.8 seconds
Horizontal Angle of View	54° at 3.6 mm wide zoom; 2.5° at 82.8 mm telephoto zoom
Focus	Automatic with manual override
Maximum Sensitivity at 35 IRE	0.025 lux at 1/1.5 sec. shutter speed (color) 0.1 lux at 1/50 sec. shutter speed (B-W) 0.004 lux at 1/1.5 sec. shutter speed (B-W)
Sync System	Internal/AC line lock, phase adjustable using remote control, V-Sync
White Balance	Automatic with manual override
Shutter Speed	Automatic (electronic iris)/manual; 1/1.5~1/30,000
Iris Control	Automatic iris control with manual override
Gain Control	Automatic/off
Video Output	1 Vp-p, 75 ohms
Video Signal-to-Noise	>50 dB
Wide Dynamic Range	80X

27X MODELS

DD427

Signal Format	NTSC
Scanning System	2:1 Interlace/1:1 Progressive (user-selectable)
Image Sensor	1/4-inch CCD
Effective Pixels	768 (H) X 494 (V)
Horizontal Resolution	>540 TV lines
Lens	f/1.4 (focal length, 3.4~119 mm; 35X optical zoom, 12X digital zoom)
Zoom Speed (optical range)	3.2/4.6/6.6 seconds
Horizontal Angle of View	55.8° at 3.4 mm wide zoom; 1.7° at 119 mm telephoto zoom
Focus	Automatic with manual override
Maximum Sensitivity at 35 IRE	0.55 lux at 1/60 sec. shutter speed (color) 0.063 lux at 1/4 sec. shutter speed (color) 0.00018 lux at 1/2 sec. shutter speed (B-W)
Sync System	Internal/AC line lock, phase adjustable using remote control, V-Sync
White Balance	Automatic with manual override
Shutter Speed	Automatic (electronic iris)/manual; 1/2~1/30,000
Iris Control	Automatic iris control with manual override
Gain Control	Automatic/off
Video Output	1 Vp-p, 75 ohms
Video Signal-to-Noise	>46 to 50 dB
Wide Dynamic Range	128X

DD427-X

Signal Format	PAL
Scanning System	2:1 Interlace/1:1 Progressive (user-selectable)
Image Sensor	1/4-inch CCD
Effective Pixels	752 (H) X 582 (V)
Horizontal Resolution	>540 TV lines
Lens	f/1.4 (focal length, 3.4~119 mm; 35X optical zoom, 12X digital zoom)
Zoom Speed	3.2/4.6/6.6 seconds
Horizontal Angle of View	55.8° at 3.4 mm wide zoom; 1.7° at 119 mm telephoto zoom
Focus	Automatic with manual override
Maximum Sensitivity at 35 IRE	0.50 lux at 1/50 sec. shutter speed (color) 0.062 lux at 1/3 sec. shutter speed (color) 0.00014 lux at 1/1.5 sec. shutter speed (B-W)
Sync System	Internal/AC line lock, phase adjustable using remote control, V-Sync
White Balance	Automatic with manual override
Shutter Speed	Automatic (electronic iris)/manual; 1/1.5~1/30,000
Iris Control	Automatic iris control with manual override
Gain Control	Automatic/off
Video Output	1 Vp-p, 75 ohms
Video Signal-to-Noise	>46 to 50 dB
Wide Dynamic Range	128X

35X MODELS

DD4CBW35

Signal Format	NTSC
Scanning System	2:1 Interlace/1:1 Progressive (user-selectable)
Image Sensor	1/4-inch CCD
Effective Pixels	768 (H) X 494 (V)
Horizontal Resolution	>540 TV lines
Lens	f/1.4 (focal length, 3.4~119 mm; 35X optical zoom, 12X digital zoom)
Zoom Speed (optical range)	3.2/4.6/6.6 seconds
Horizontal Angle of View	55.8° at 3.4 mm wide zoom; 1.7° at 119 mm telephoto zoom
Focus	Automatic with manual override
Maximum Sensitivity at 35 IRE	0.55 lux at 1/60 sec. shutter speed (color) 0.063 lux at 1/4 sec. shutter speed (color) 0.00018 lux at 1/2 sec. shutter speed (B-W)
Sync System	Internal/AC line lock, phase adjustable using remote control, V-Sync
White Balance	Automatic with manual override
Shutter Speed	Automatic (electronic iris)/manual; 1/2~1/30,000
Iris Control	Automatic iris control with manual override
Gain Control	Automatic/off
Video Output	1 Vp-p, 75 ohms
Video Signal-to-Noise	>46 to 50 dB
Wide Dynamic Range	128X

DD4CBW35-X

Signal Format	PAL
Scanning System	2:1 Interlace/1:1 Progressive (user-selectable)
Image Sensor	1/4-inch CCD
Effective Pixels	752 (H) X 582 (V)
Horizontal Resolution	>540 TV lines
Lens	f/1.4 (focal length, 3.4~119 mm; 35X optical zoom, 12X digital zoom)
Zoom Speed	3.2/4.6/6.6 seconds
Horizontal Angle of View	55.8° at 3.4 mm wide zoom; 1.7° at 119 mm telephoto zoom
Focus	Automatic with manual override
Maximum Sensitivity at 35 IRE	0.50 lux at 1/50 sec. shutter speed (color) 0.062 lux at 1/3 sec. shutter speed (color) 0.00014 lux at 1/1.5 sec. shutter speed (B-W)
Sync System	Internal/AC line lock, phase adjustable using remote control, V-Sync
White Balance	Automatic with manual override
Shutter Speed	Automatic (electronic iris)/manual; 1/1.5~1/30,000
Iris Control	Automatic iris control with manual override
Gain Control	Automatic/off
Video Output	1 Vp-p, 75 ohms
Video Signal-to-Noise	>46 to 50 dB
Wide Dynamic Range	128X

Appendix

Table F. Switch Settings for SW1 Pelco P-Type Control

SPECTRA ADDRESS	SWITCH SETTING							
	SW1-1	SW1-2	SW1-3	SW1-4	SW1-5	SW1-6	SW1-7	SW1-8
1	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF
2	ON	OFF	OFF	OFF	OFF	OFF	OFF	OFF
3	OFF	ON	OFF	OFF	OFF	OFF	OFF	OFF
4	ON	ON	OFF	OFF	OFF	OFF	OFF	OFF
5	OFF	OFF	ON	OFF	OFF	OFF	OFF	OFF
6	ON	OFF	ON	OFF	OFF	OFF	OFF	OFF
7	OFF	ON	ON	OFF	OFF	OFF	OFF	OFF
8	ON	ON	ON	OFF	OFF	OFF	OFF	OFF
9	OFF	OFF	OFF	ON	OFF	OFF	OFF	OFF
10	ON	OFF	OFF	ON	OFF	OFF	OFF	OFF
11	OFF	ON	OFF	ON	OFF	OFF	OFF	OFF
12	ON	ON	OFF	ON	OFF	OFF	OFF	OFF
13	OFF	OFF	ON	ON	OFF	OFF	OFF	OFF
14	ON	OFF	ON	ON	OFF	OFF	OFF	OFF
15	OFF	ON	ON	ON	OFF	OFF	OFF	OFF
16	ON	ON	ON	ON	OFF	OFF	OFF	OFF
17	OFF	OFF	OFF	OFF	ON	OFF	OFF	OFF
18	ON	OFF	OFF	OFF	ON	OFF	OFF	OFF
19	OFF	ON	OFF	OFF	ON	OFF	OFF	OFF
20	ON	ON	OFF	OFF	ON	OFF	OFF	OFF
21	OFF	OFF	ON	OFF	ON	OFF	OFF	OFF
22	ON	OFF	ON	OFF	ON	OFF	OFF	OFF
23	OFF	ON	ON	OFF	ON	OFF	OFF	OFF
24	ON	ON	ON	OFF	ON	OFF	OFF	OFF
25	OFF	OFF	OFF	ON	ON	OFF	OFF	OFF
26	ON	OFF	OFF	ON	ON	OFF	OFF	OFF
27	OFF	ON	OFF	ON	ON	OFF	OFF	OFF
28	ON	ON	OFF	ON	ON	OFF	OFF	OFF
29	OFF	OFF	ON	ON	ON	OFF	OFF	OFF
30	ON	OFF	ON	ON	ON	OFF	OFF	OFF
31	OFF	ON	ON	ON	ON	OFF	OFF	OFF
32	ON	ON	ON	ON	ON	OFF	OFF	OFF

Table G. Switch Settings for SW1 Pelco D-Type Control *(1 of 6)*

SPECTRA ADDRESS	SWITCH SETTING							
	SW1-1	SW1-2	SW1-3	SW1-4	SW1-5	SW1-6	SW1-7	SW1-8
1	ON	OFF	OFF	OFF	OFF	OFF	OFF	OFF
2	OFF	ON	OFF	OFF	OFF	OFF	OFF	OFF
3	ON	ON	OFF	OFF	OFF	OFF	OFF	OFF
4	OFF	OFF	ON	OFF	OFF	OFF	OFF	OFF
5	ON	OFF	ON	OFF	OFF	OFF	OFF	OFF
6	OFF	ON	ON	OFF	OFF	OFF	OFF	OFF
7	ON	ON	ON	OFF	OFF	OFF	OFF	OFF
8	OFF	OFF	OFF	ON	OFF	OFF	OFF	OFF
9	ON	OFF	OFF	ON	OFF	OFF	OFF	OFF
10	OFF	ON	OFF	ON	OFF	OFF	OFF	OFF
11	ON	ON	OFF	ON	OFF	OFF	OFF	OFF
12	OFF	OFF	ON	ON	OFF	OFF	OFF	OFF
13	ON	OFF	ON	ON	OFF	OFF	OFF	OFF
14	OFF	ON	ON	ON	OFF	OFF	OFF	OFF
15	ON	ON	ON	ON	OFF	OFF	OFF	OFF
16	OFF	OFF	OFF	OFF	ON	OFF	OFF	OFF
17	ON	OFF	OFF	OFF	ON	OFF	OFF	OFF
18	OFF	ON	OFF	OFF	ON	OFF	OFF	OFF
19	ON	ON	OFF	OFF	ON	OFF	OFF	OFF
20	OFF	OFF	ON	OFF	ON	OFF	OFF	OFF
21	ON	OFF	ON	OFF	ON	OFF	OFF	OFF
22	OFF	ON	ON	OFF	ON	OFF	OFF	OFF
23	ON	ON	ON	OFF	ON	OFF	OFF	OFF
24	OFF	OFF	OFF	ON	ON	OFF	OFF	OFF
25	ON	OFF	OFF	ON	ON	OFF	OFF	OFF
26	OFF	ON	OFF	ON	ON	OFF	OFF	OFF
27	ON	ON	OFF	ON	ON	OFF	OFF	OFF
28	OFF	OFF	ON	ON	ON	OFF	OFF	OFF
29	ON	OFF	ON	ON	ON	OFF	OFF	OFF
30	OFF	ON	ON	ON	ON	OFF	OFF	OFF
31	ON	ON	ON	ON	ON	OFF	OFF	OFF
32	OFF	OFF	OFF	OFF	OFF	ON	OFF	OFF
33	ON	OFF	OFF	OFF	OFF	ON	OFF	OFF
34	OFF	ON	OFF	OFF	OFF	ON	OFF	OFF
35	ON	ON	OFF	OFF	OFF	ON	OFF	OFF
36	OFF	OFF	ON	OFF	OFF	ON	OFF	OFF
37	ON	OFF	ON	OFF	OFF	ON	OFF	OFF
38	OFF	ON	ON	OFF	OFF	ON	OFF	OFF
39	ON	ON	ON	OFF	OFF	ON	OFF	OFF
40	OFF	OFF	OFF	ON	OFF	ON	OFF	OFF
41	ON	OFF	OFF	ON	OFF	ON	OFF	OFF
42	OFF	ON	OFF	ON	OFF	ON	OFF	OFF
43	ON	ON	OFF	ON	OFF	ON	OFF	OFF
44	OFF	OFF	ON	ON	OFF	ON	OFF	OFF
45	ON	OFF	ON	ON	OFF	ON	OFF	OFF
46	OFF	ON	ON	ON	OFF	ON	OFF	OFF
47	ON	ON	ON	ON	OFF	ON	OFF	OFF
48	OFF	OFF	OFF	OFF	ON	ON	OFF	OFF
49	ON	OFF	OFF	OFF	ON	ON	OFF	OFF

Table G. Switch Settings for SW1 Pelco D-Type Control *(2 of 6)*

SPECTRA ADDRESS	SWITCH SETTING							
	SW1-1	SW1-2	SW1-3	SW1-4	SW1-5	SW1-6	SW1-7	SW1-8
50	OFF	ON	OFF	OFF	ON	ON	OFF	OFF
51	ON	ON	OFF	OFF	ON	ON	OFF	OFF
52	OFF	OFF	ON	OFF	ON	ON	OFF	OFF
53	ON	OFF	ON	OFF	ON	ON	OFF	OFF
54	OFF	ON	ON	OFF	ON	ON	OFF	OFF
55	ON	ON	ON	OFF	ON	ON	OFF	OFF
56	OFF	OFF	OFF	ON	ON	ON	OFF	OFF
57	ON	OFF	OFF	ON	ON	ON	OFF	OFF
58	OFF	ON	OFF	ON	ON	ON	OFF	OFF
59	ON	ON	OFF	ON	ON	ON	OFF	OFF
60	OFF	OFF	ON	ON	ON	ON	OFF	OFF
61	ON	OFF	ON	ON	ON	ON	OFF	OFF
62	OFF	ON	ON	ON	ON	ON	OFF	OFF
63	ON	ON	ON	ON	ON	ON	OFF	OFF
64	OFF	OFF	OFF	OFF	OFF	OFF	ON	OFF
65	ON	OFF	OFF	OFF	OFF	OFF	ON	OFF
66	OFF	ON	OFF	OFF	OFF	OFF	ON	OFF
67	ON	ON	OFF	OFF	OFF	OFF	ON	OFF
68	OFF	OFF	ON	OFF	OFF	OFF	ON	OFF
69	ON	OFF	ON	OFF	OFF	OFF	ON	OFF
70	OFF	ON	ON	OFF	OFF	OFF	ON	OFF
71	ON	ON	ON	OFF	OFF	OFF	ON	OFF
72	OFF	OFF	OFF	ON	OFF	OFF	ON	OFF
73	ON	OFF	OFF	ON	OFF	OFF	ON	OFF
74	OFF	ON	OFF	ON	OFF	OFF	ON	OFF
75	ON	ON	OFF	ON	OFF	OFF	ON	OFF
76	OFF	OFF	ON	ON	OFF	OFF	ON	OFF
77	ON	OFF	ON	ON	OFF	OFF	ON	OFF
78	OFF	ON	ON	ON	OFF	OFF	ON	OFF
79	ON	ON	ON	ON	OFF	OFF	ON	OFF
80	OFF	OFF	OFF	OFF	ON	OFF	ON	OFF
81	ON	OFF	OFF	OFF	ON	OFF	ON	OFF
82	OFF	ON	OFF	OFF	ON	OFF	ON	OFF
83	ON	ON	OFF	OFF	ON	OFF	ON	OFF
84	OFF	OFF	ON	OFF	ON	OFF	ON	OFF
85	ON	OFF	ON	OFF	ON	OFF	ON	OFF
86	OFF	ON	ON	OFF	ON	OFF	ON	OFF
87	ON	ON	ON	OFF	ON	OFF	ON	OFF
88	OFF	OFF	OFF	ON	ON	OFF	ON	OFF
89	ON	OFF	OFF	ON	ON	OFF	ON	OFF
90	OFF	ON	OFF	ON	ON	OFF	ON	OFF
91	ON	ON	OFF	ON	ON	OFF	ON	OFF
92	OFF	OFF	ON	ON	ON	OFF	ON	OFF
93	ON	OFF	ON	ON	ON	OFF	ON	OFF
94	OFF	ON	ON	ON	ON	OFF	ON	OFF
95	ON	ON	ON	ON	ON	OFF	ON	OFF
96	OFF	OFF	OFF	OFF	OFF	ON	ON	OFF
97	ON	OFF	OFF	OFF	OFF	ON	ON	OFF
98	OFF	ON	OFF	OFF	OFF	ON	ON	OFF

Table G. Switch Settings for SW1 Pelco D-Type Control *(3 of 6)*

SPECTRA ADDRESS	SWITCH SETTING							
	SW1-1	SW1-2	SW1-3	SW1-4	SW1-5	SW1-6	SW1-7	SW1-8
99	ON	ON	OFF	OFF	OFF	ON	ON	OFF
100	OFF	OFF	ON	OFF	OFF	ON	ON	OFF
101	ON	OFF	ON	OFF	OFF	ON	ON	OFF
102	OFF	ON	ON	OFF	OFF	ON	ON	OFF
103	ON	ON	ON	OFF	OFF	ON	ON	OFF
104	OFF	OFF	OFF	ON	OFF	ON	ON	OFF
105	ON	OFF	OFF	ON	OFF	ON	ON	OFF
106	OFF	ON	OFF	ON	OFF	ON	ON	OFF
107	ON	ON	OFF	ON	OFF	ON	ON	OFF
108	OFF	OFF	ON	ON	OFF	ON	ON	OFF
109	ON	OFF	ON	ON	OFF	ON	ON	OFF
110	OFF	ON	ON	ON	OFF	ON	ON	OFF
111	ON	ON	ON	ON	OFF	ON	ON	OFF
112	OFF	OFF	OFF	OFF	ON	ON	ON	OFF
113	ON	OFF	OFF	OFF	ON	ON	ON	OFF
114	OFF	ON	OFF	OFF	ON	ON	ON	OFF
115	ON	ON	OFF	OFF	ON	ON	ON	OFF
116	OFF	OFF	ON	OFF	ON	ON	ON	OFF
117	ON	OFF	ON	OFF	ON	ON	ON	OFF
118	OFF	ON	ON	OFF	ON	ON	ON	OFF
119	ON	ON	ON	OFF	ON	ON	ON	OFF
120	OFF	OFF	OFF	ON	ON	ON	ON	OFF
121	ON	OFF	OFF	ON	ON	ON	ON	OFF
122	OFF	ON	OFF	ON	ON	ON	ON	OFF
123	ON	ON	OFF	ON	ON	ON	ON	OFF
124	OFF	OFF	ON	ON	ON	ON	ON	OFF
125	ON	OFF	ON	ON	ON	ON	ON	OFF
126	OFF	ON	ON	ON	ON	ON	ON	OFF
127	ON	ON	ON	ON	ON	ON	ON	OFF
128	OFF	OFF	OFF	OFF	OFF	OFF	OFF	ON
129	ON	OFF	OFF	OFF	OFF	OFF	OFF	ON
130	OFF	ON	OFF	OFF	OFF	OFF	OFF	ON
131	ON	ON	OFF	OFF	OFF	OFF	OFF	ON
132	OFF	OFF	ON	OFF	OFF	OFF	OFF	ON
133	ON	OFF	ON	OFF	OFF	OFF	OFF	ON
134	OFF	ON	ON	OFF	OFF	OFF	OFF	ON
135	ON	ON	ON	OFF	OFF	OFF	OFF	ON
136	OFF	OFF	OFF	ON	OFF	OFF	OFF	ON
137	ON	OFF	OFF	ON	OFF	OFF	OFF	ON
138	OFF	ON	OFF	ON	OFF	OFF	OFF	ON
139	ON	ON	OFF	ON	OFF	OFF	OFF	ON
140	OFF	OFF	ON	ON	OFF	OFF	OFF	ON
141	ON	OFF	ON	ON	OFF	OFF	OFF	ON
142	OFF	ON	ON	ON	OFF	OFF	OFF	ON
143	ON	ON	ON	ON	OFF	OFF	OFF	ON
144	OFF	OFF	OFF	OFF	ON	OFF	OFF	ON
145	ON	OFF	OFF	OFF	ON	OFF	OFF	ON
146	OFF	ON	OFF	OFF	ON	OFF	OFF	ON
147	ON	ON	OFF	OFF	ON	OFF	OFF	ON

Table G. Switch Settings for SW1 Pelco D-Type Control *(4 of 6)*

SPECTRA ADDRESS	SWITCH SETTING							
	SW1-1	SW1-2	SW1-3	SW1-4	SW1-5	SW1-6	SW1-7	SW1-8
148	OFF	OFF	ON	OFF	ON	OFF	OFF	ON
149	ON	OFF	ON	OFF	ON	OFF	OFF	ON
150	OFF	ON	ON	OFF	ON	OFF	OFF	ON
151	ON	ON	ON	OFF	ON	OFF	OFF	ON
152	OFF	OFF	OFF	ON	ON	OFF	OFF	ON
153	ON	OFF	OFF	ON	ON	OFF	OFF	ON
154	OFF	ON	OFF	ON	ON	OFF	OFF	ON
155	ON	ON	OFF	ON	ON	OFF	OFF	ON
156	OFF	OFF	ON	ON	ON	OFF	OFF	ON
157	ON	OFF	ON	ON	ON	OFF	OFF	ON
158	OFF	ON	ON	ON	ON	OFF	OFF	ON
159	ON	ON	ON	ON	ON	OFF	OFF	ON
160	OFF	OFF	OFF	OFF	OFF	ON	OFF	ON
161	ON	OFF	OFF	OFF	OFF	ON	OFF	ON
162	OFF	ON	OFF	OFF	OFF	ON	OFF	ON
163	ON	ON	OFF	OFF	OFF	ON	OFF	ON
164	OFF	OFF	ON	OFF	OFF	ON	OFF	ON
165	ON	OFF	ON	OFF	OFF	ON	OFF	ON
166	OFF	ON	ON	OFF	OFF	ON	OFF	ON
167	ON	ON	ON	OFF	OFF	ON	OFF	ON
168	OFF	OFF	OFF	ON	OFF	ON	OFF	ON
169	ON	OFF	OFF	ON	OFF	ON	OFF	ON
170	OFF	ON	OFF	ON	OFF	ON	OFF	ON
171	ON	ON	OFF	ON	OFF	ON	OFF	ON
172	OFF	OFF	ON	ON	OFF	ON	OFF	ON
173	ON	OFF	ON	ON	OFF	ON	OFF	ON
174	OFF	ON	ON	ON	OFF	ON	OFF	ON
175	ON	ON	ON	ON	OFF	ON	OFF	ON
176	OFF	OFF	OFF	OFF	ON	ON	OFF	ON
177	ON	OFF	OFF	OFF	ON	ON	OFF	ON
178	OFF	ON	OFF	OFF	ON	ON	OFF	ON
179	ON	ON	OFF	OFF	ON	ON	OFF	ON
180	OFF	OFF	ON	OFF	ON	ON	OFF	ON
181	ON	OFF	ON	OFF	ON	ON	OFF	ON
182	OFF	ON	ON	OFF	ON	ON	OFF	ON
183	ON	ON	ON	OFF	ON	ON	OFF	ON
184	OFF	OFF	OFF	ON	ON	ON	OFF	ON
185	ON	OFF	OFF	ON	ON	ON	OFF	ON
186	OFF	ON	OFF	ON	ON	ON	OFF	ON
187	ON	ON	OFF	ON	ON	ON	OFF	ON
188	OFF	OFF	ON	ON	ON	ON	OFF	ON
189	ON	OFF	ON	ON	ON	ON	OFF	ON
190	OFF	ON	ON	ON	ON	ON	OFF	ON
191	ON	ON	ON	ON	ON	ON	OFF	ON
192	OFF	OFF	OFF	OFF	OFF	OFF	ON	ON
193	ON	OFF	OFF	OFF	OFF	OFF	ON	ON
194	OFF	ON	OFF	OFF	OFF	OFF	ON	ON
195	ON	ON	OFF	OFF	OFF	OFF	ON	ON
196	OFF	OFF	ON	OFF	OFF	OFF	ON	ON

Table G. Switch Settings for SW1 Pelco D-Type Control *(5 of 6)*

SPECTRA ADDRESS	SWITCH SETTING							
	SW1-1	SW1-2	SW1-3	SW1-4	SW1-5	SW1-6	SW1-7	SW1-8
197	ON	OFF	ON	OFF	OFF	OFF	ON	ON
198	OFF	ON	ON	OFF	OFF	OFF	ON	ON
199	ON	ON	ON	OFF	OFF	OFF	ON	ON
200	OFF	OFF	OFF	ON	OFF	OFF	ON	ON
201	ON	OFF	OFF	ON	OFF	OFF	ON	ON
202	OFF	ON	OFF	ON	OFF	OFF	ON	ON
203	ON	ON	OFF	ON	OFF	OFF	ON	ON
204	OFF	OFF	ON	ON	OFF	OFF	ON	ON
205	ON	OFF	ON	ON	OFF	OFF	ON	ON
206	OFF	ON	ON	ON	OFF	OFF	ON	ON
207	ON	ON	ON	ON	OFF	OFF	ON	ON
208	OFF	OFF	OFF	OFF	ON	OFF	ON	ON
209	ON	OFF	OFF	OFF	ON	OFF	ON	ON
210	OFF	ON	OFF	OFF	ON	OFF	ON	ON
211	ON	ON	OFF	OFF	ON	OFF	ON	ON
212	OFF	OFF	ON	OFF	ON	OFF	ON	ON
213	ON	OFF	ON	OFF	ON	OFF	ON	ON
214	OFF	ON	ON	OFF	ON	OFF	ON	ON
215	ON	ON	ON	OFF	ON	OFF	ON	ON
216	OFF	OFF	OFF	ON	ON	OFF	ON	ON
217	ON	OFF	OFF	ON	ON	OFF	ON	ON
218	OFF	ON	OFF	ON	ON	OFF	ON	ON
219	ON	ON	OFF	ON	ON	OFF	ON	ON
220	OFF	OFF	ON	ON	ON	OFF	ON	ON
221	ON	OFF	ON	ON	ON	OFF	ON	ON
222	OFF	ON	ON	ON	ON	OFF	ON	ON
223	ON	ON	ON	ON	ON	OFF	ON	ON
224	OFF	OFF	OFF	OFF	OFF	ON	ON	ON
225	ON	OFF	OFF	OFF	OFF	ON	ON	ON
226	OFF	ON	OFF	OFF	OFF	ON	ON	ON
227	ON	ON	OFF	OFF	OFF	ON	ON	ON
228	OFF	OFF	ON	OFF	OFF	ON	ON	ON
229	ON	OFF	ON	OFF	OFF	ON	ON	ON
230	OFF	ON	ON	OFF	OFF	ON	ON	ON
231	ON	ON	ON	OFF	OFF	ON	ON	ON
232	OFF	OFF	OFF	ON	OFF	ON	ON	ON
233	ON	OFF	OFF	ON	OFF	ON	ON	ON
234	OFF	ON	OFF	ON	OFF	ON	ON	ON
235	ON	ON	OFF	ON	OFF	ON	ON	ON
236	OFF	OFF	ON	ON	OFF	ON	ON	ON
237	ON	OFF	ON	ON	OFF	ON	ON	ON
238	OFF	ON	ON	ON	OFF	ON	ON	ON
239	ON	ON	ON	ON	OFF	ON	ON	ON
240	OFF	OFF	OFF	OFF	ON	ON	ON	ON
241	ON	OFF	OFF	OFF	ON	ON	ON	ON
242	OFF	ON	OFF	OFF	ON	ON	ON	ON
243	ON	ON	OFF	OFF	ON	ON	ON	ON
244	OFF	OFF	ON	OFF	ON	ON	ON	ON
245	ON	OFF	ON	OFF	ON	ON	ON	ON

Table G. Switch Settings for SW1 Pelco D-Type Control *(6 of 6)*

SPECTRA ADDRESS	SWITCH SETTING							
	SW1-1	SW1-2	SW1-3	SW1-4	SW1-5	SW1-6	SW1-7	SW1-8
246	OFF	ON	ON	OFF	ON	ON	ON	ON
247	ON	ON	ON	OFF	ON	ON	ON	ON
248	OFF	OFF	OFF	ON	ON	ON	ON	ON
249	ON	OFF	OFF	ON	ON	ON	ON	ON
250	OFF	ON	OFF	ON	ON	ON	ON	ON
251	ON	ON	OFF	ON	ON	ON	ON	ON
252	OFF	OFF	ON	ON	ON	ON	ON	ON
253	ON	OFF	ON	ON	ON	ON	ON	ON
254	OFF	ON	ON	ON	ON	ON	ON	ON

PRODUCT WARRANTY AND RETURN INFORMATION

WARRANTY

Pelco will repair or replace, without charge, any merchandise proved defective in material or workmanship **for a period of one year** after the date of shipment.

Exceptions to this warranty are as noted below:

- Five years:
  - Fiber optic products
  - TW3000 Series unshielded twisted pair (UTP) transmission products
  - CC3701H-2, CC3701H-2X, CC3751H-2, CC3651H-2X, MC3651H-2, and MC3651H-2X camera models
- Three years:
  - Pelco-designed fixed network cameras and network dome cameras with Sarix™ technology.
  - Pelco-branded fixed camera models (CCC1390H Series, C10DN Series, C10CH Series, and IP3701H Series)
  - EH1500 Series enclosures
  - Spectra® IV products (including Spectra IV IP)
  - Camclosure® Series (IS, ICS, IP) integrated camera systems
  - DX Series digital video recorders, DVR5100 Series digital video recorders, Digital Sentry® Series hardware products, DVX Series digital video recorders, and NVR300 Series network video recorders
  - Endura® Series distributed network-based video products
  - Genex® Series products (multiplexers, server, and keyboard)
  - PMCL200/300/400 Series LCD monitors
- Two years:
  - Standard varifocal, fixed focal, and motorized zoom lenses
  - DF5/DF8 Series fixed dome products
  - Legacy® Series integrated positioning systems
  - Spectra III™, Spectra Mini, Spectra Mini IP, Esprit®, ExSite®, and PS20 scanners, including when used in continuous motion applications.
  - Esprit Ti and TI2500 Series thermal imaging products
  - Esprit and WW5700 Series window wiper (excluding wiper blades).
  - CM6700/CM6800/CM9700 Series matrix
  - Digital Light Processing (DLP®) displays (except lamp and color wheel). The lamp and color wheel will be covered for a period of 90 days. The air filter is not covered under warranty.
  - Intelli-M® eIDC controllers
  - PMCL542F, PMCL547F, and PMCL552F FHD monitors
- One year:
  - Video cassette recorders (VCRs), except video heads. Video heads will be covered for a period of six months.
- Six months:
  - All pan and tilts, scanners, or preset lenses used in continuous motion applications (preset scan, tour, and auto scan modes).

Pelco will warrant all replacement parts and repairs for 90 days from the date of Pelco shipment. All goods requiring warranty repair shall be sent freight prepaid to a Pelco designated location. Repairs made necessary by reason of misuse, alteration, normal wear, or accident are not covered under this warranty.

Pelco assumes no risk and shall be subject to no liability for damages or loss resulting from the specific use or application made of the Products. Pelco's liability for any claim, whether based on breach of contract, negligence, infringement of any rights of any party or product liability, relating to the Products shall not exceed the price paid by the Dealer to Pelco for such Products. In no event will Pelco be liable for any special, incidental, or consequential damages (including loss of use, loss of profit, and claims of third parties) however caused, whether by the negligence of Pelco or otherwise.

The above warranty provides the Dealer with specific legal rights. The Dealer may also have additional rights, which are subject to variation from state to state.

If a warranty repair is required, the Dealer must contact Pelco at (800) 289-9100 or (559) 292-1981 to obtain a Repair Authorization number (RA), and provide the following information:

1. Model and serial number
2. Date of shipment, P.O. number, sales order number, or Pelco invoice number
3. Details of the defect or problem

If there is a dispute regarding the warranty of a product that does not fall under the warranty conditions stated above, please include a written explanation with the product when returned.

Method of return shipment shall be the same or equal to the method by which the item was received by Pelco.

RETURNS

To expedite parts returned for repair or credit, please call Pelco at (800) 289-9100 or (559) 292-1981 to obtain an authorization number (CA number if returned for credit, and RA number if returned for repair) and designated return location.

All merchandise returned for credit may be subject to a 20 percent restocking and refurbishing charge.

Goods returned for repair or credit should be clearly identified with the assigned CA or RA number and freight should be prepaid.

10-1-09

Green The materials used in the manufacture of this document and its components are compliant to the requirements of Directive 2002/95/EC.

This equipment contains electrical or electronic components that must be recycled properly to comply with Directive 2002/96/EC of the European Union regarding the disposal of waste electrical and electronic equipment (WEEE). Contact your local dealer for procedures for recycling this equipment.

REVISION HISTORY

Manual #	Date	Comments
C3463M	10/09	Original version.

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